

FIG.1

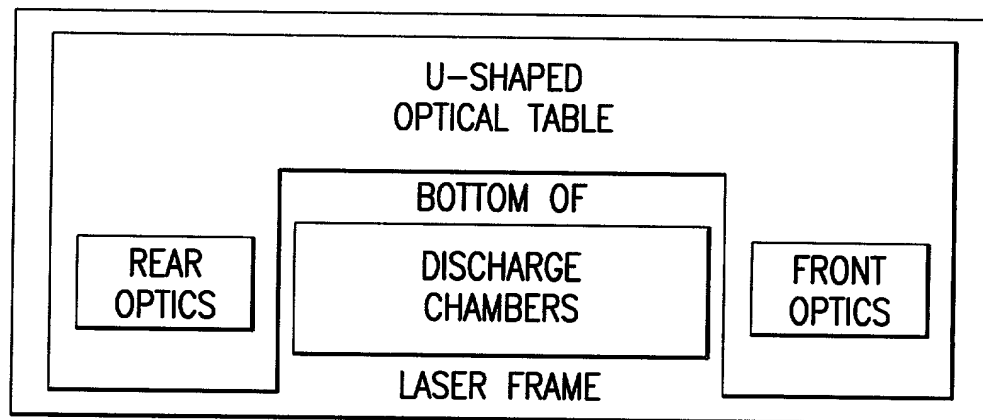


FIG. 1A

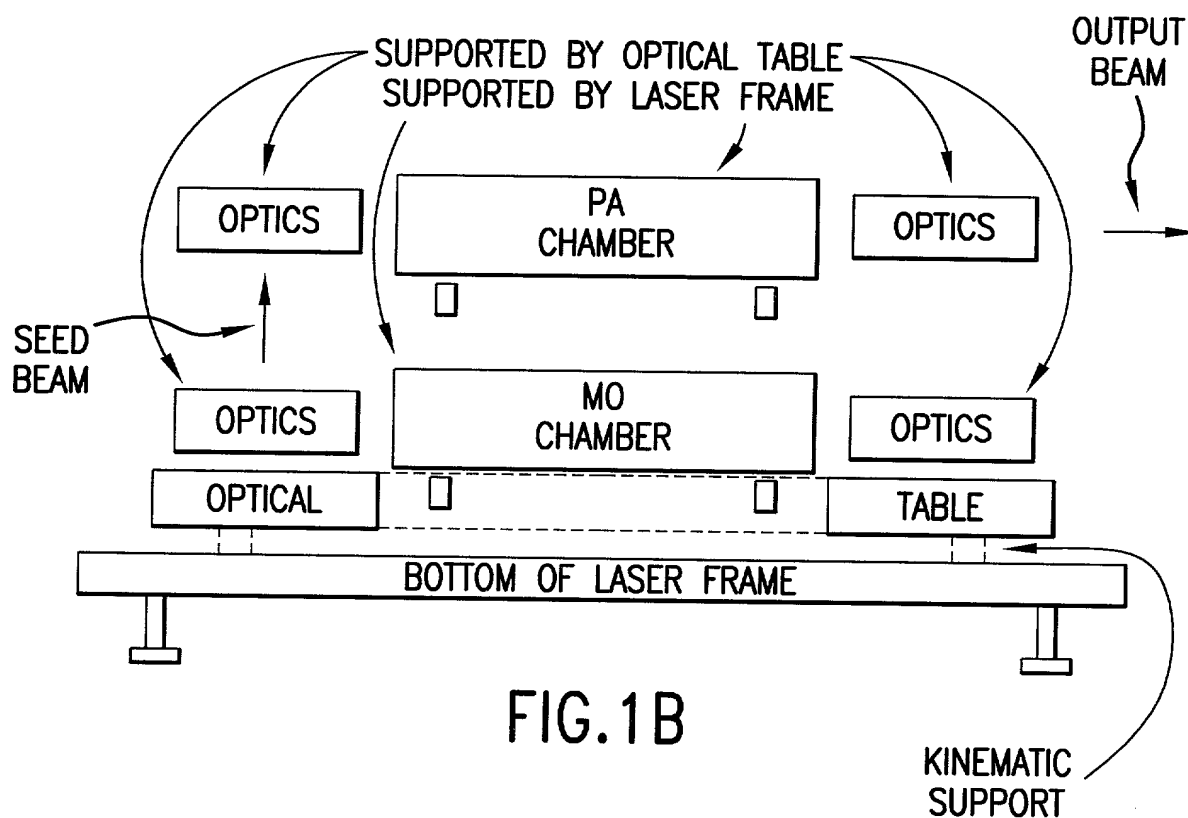


FIG. 1B

BALL IN GROOVE

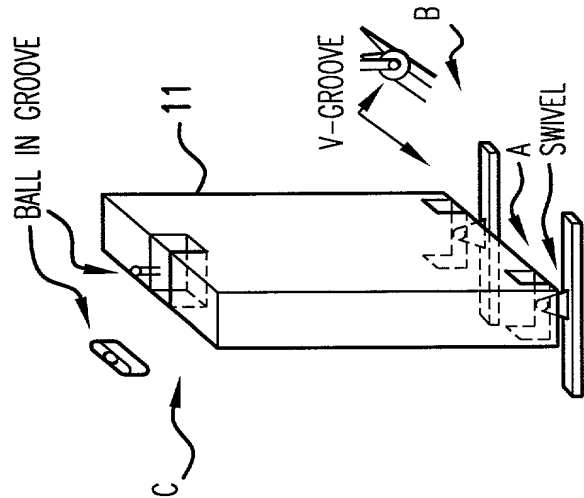


FIG. 1C1

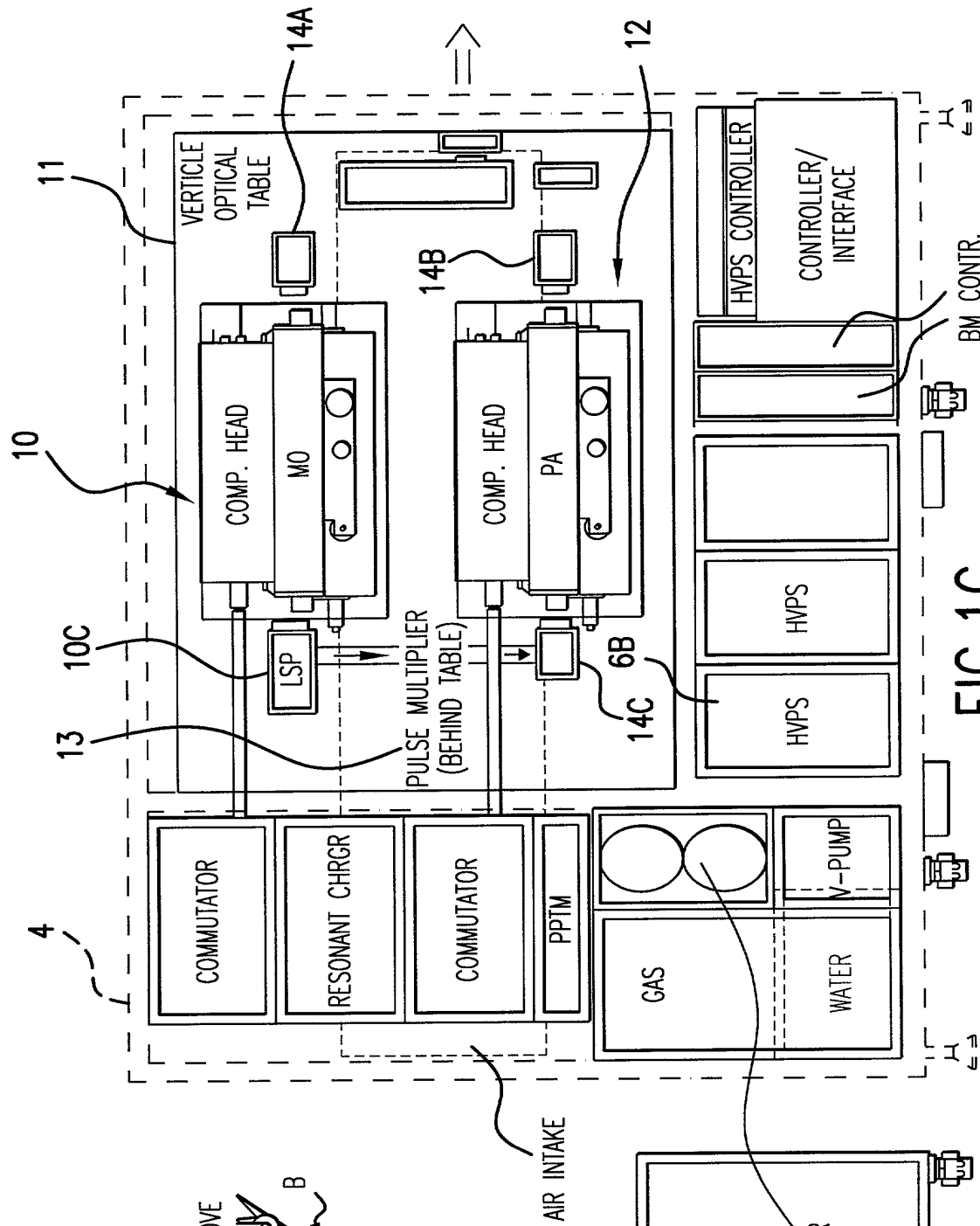


FIG. 1C

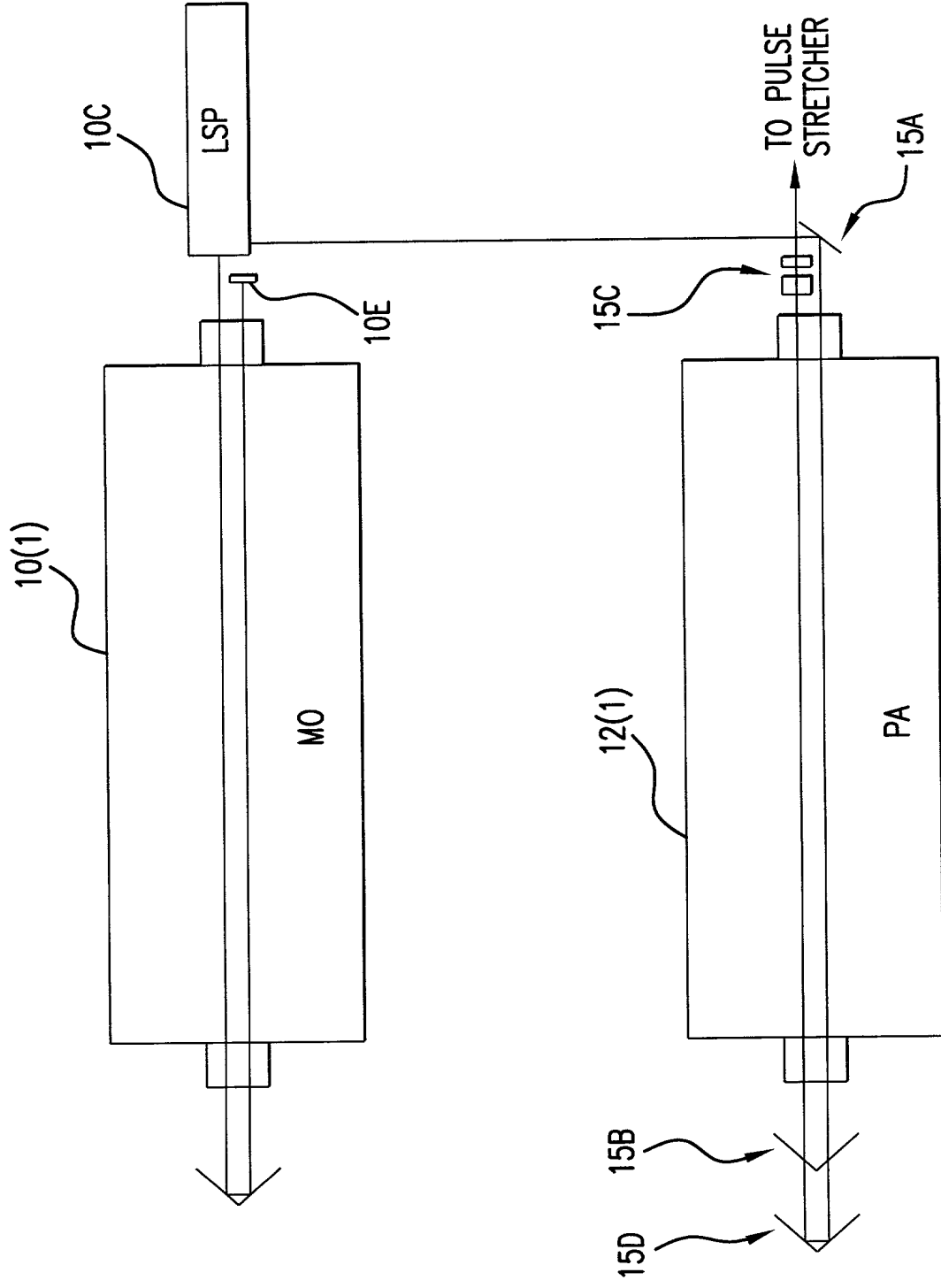


FIG.1D

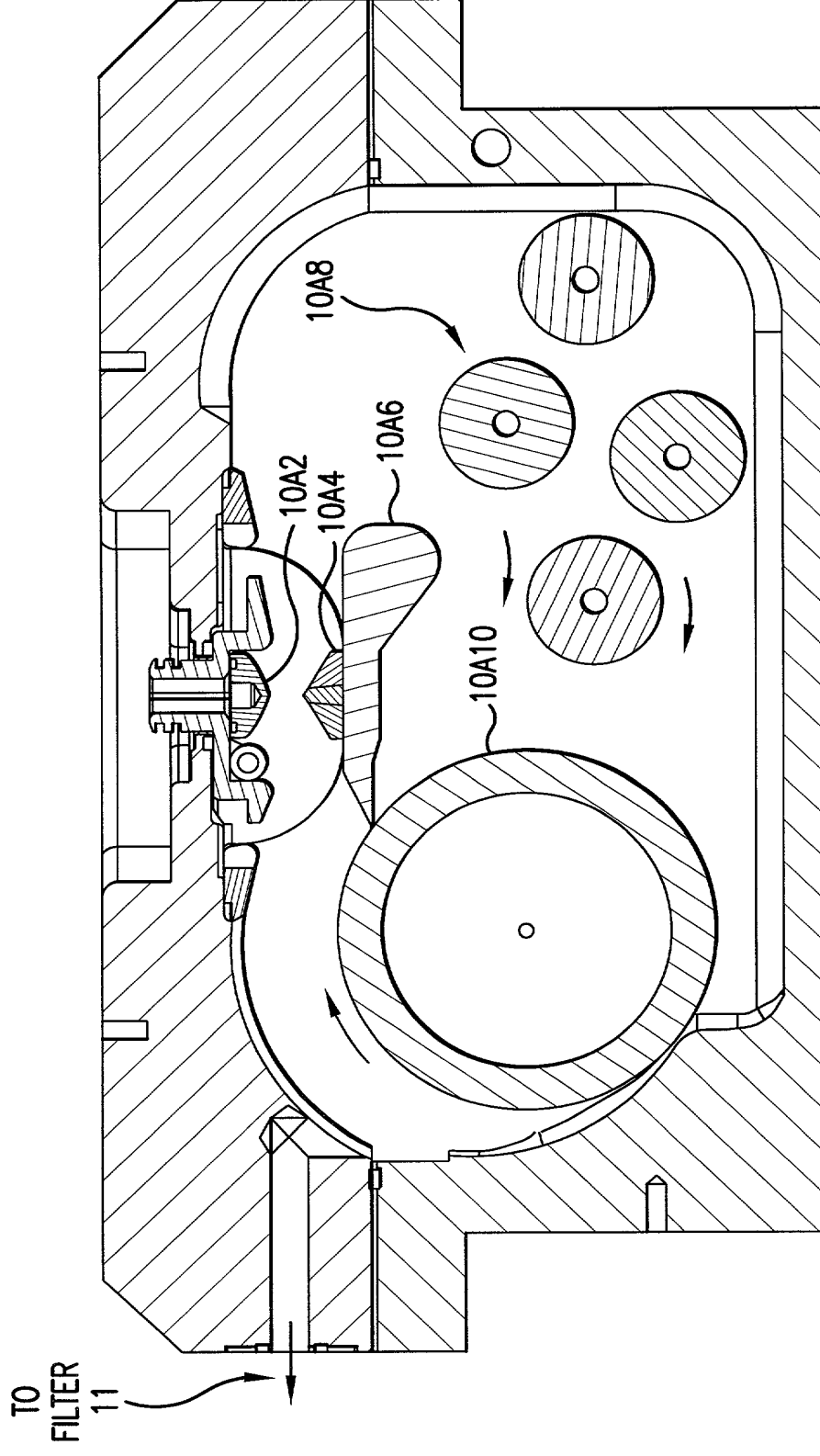


FIG. 2

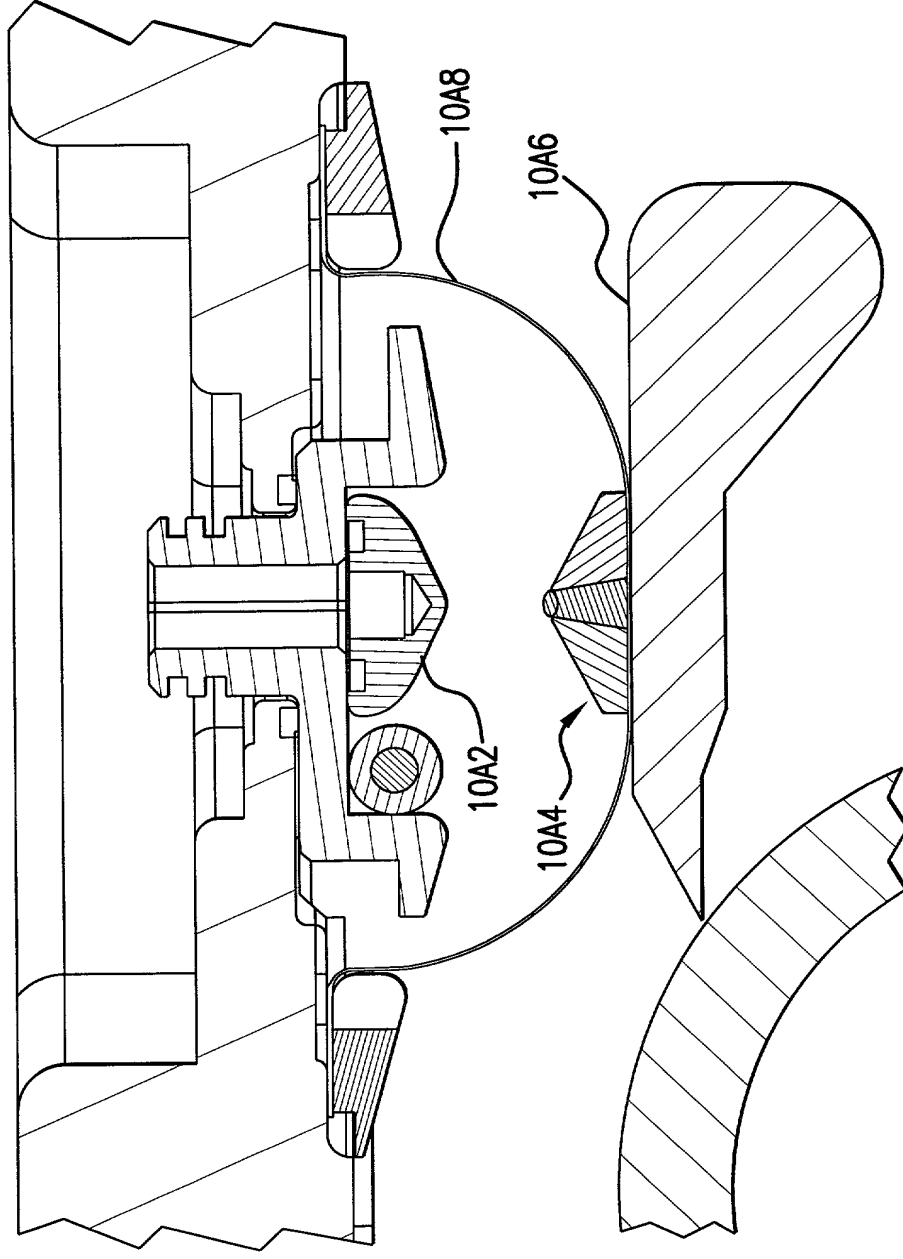


FIG. 3

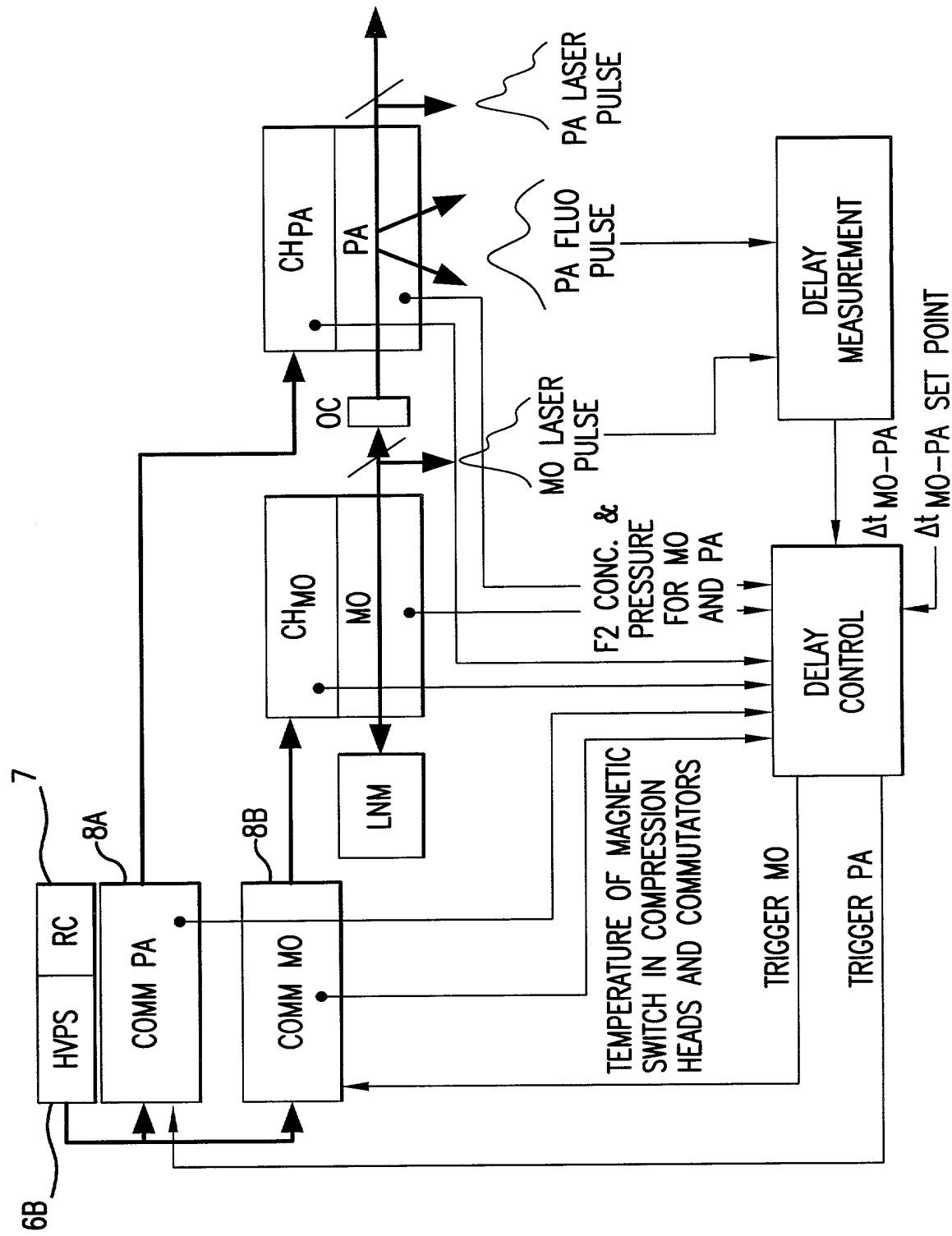


FIG.4

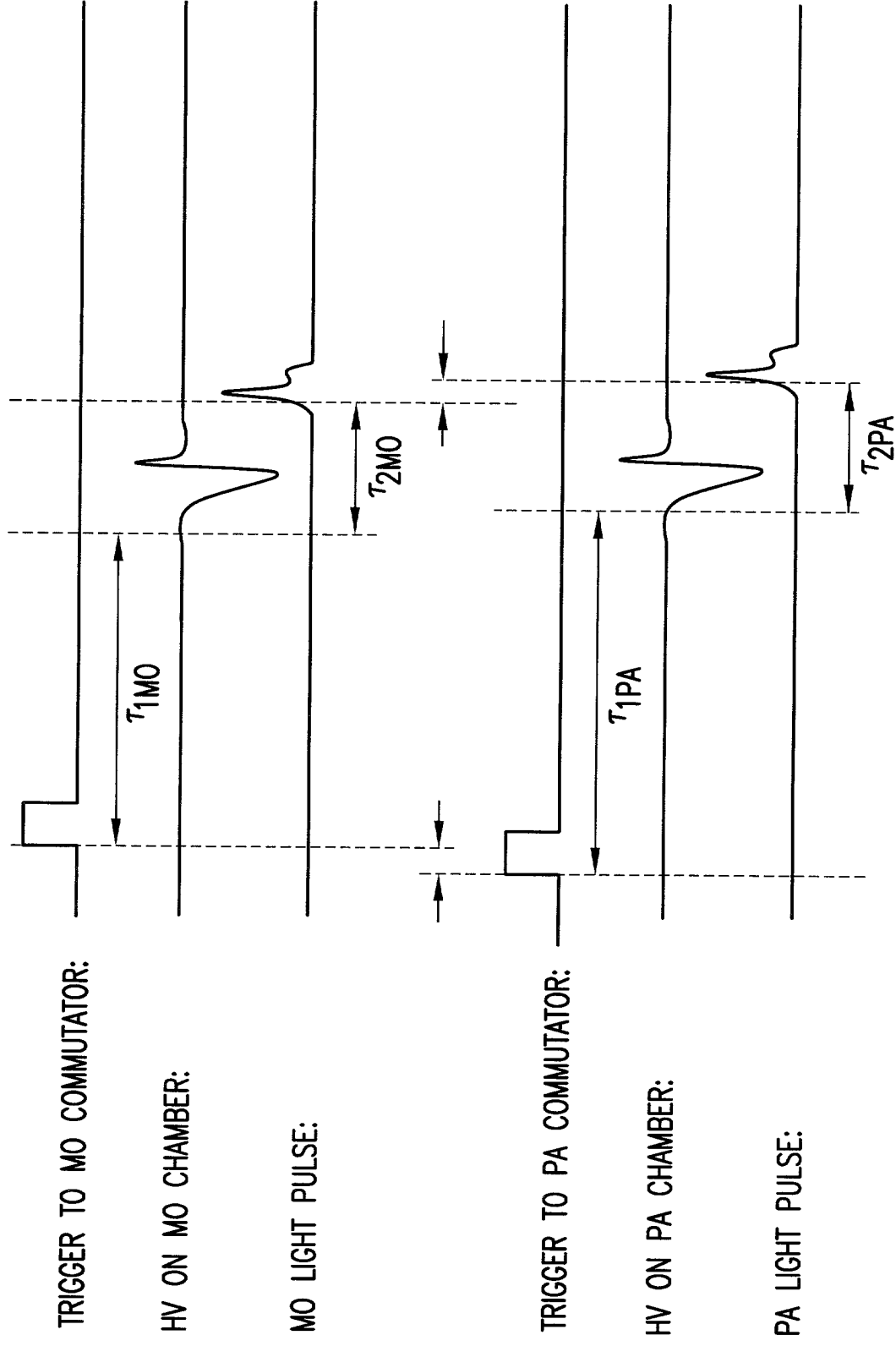


FIG.4A



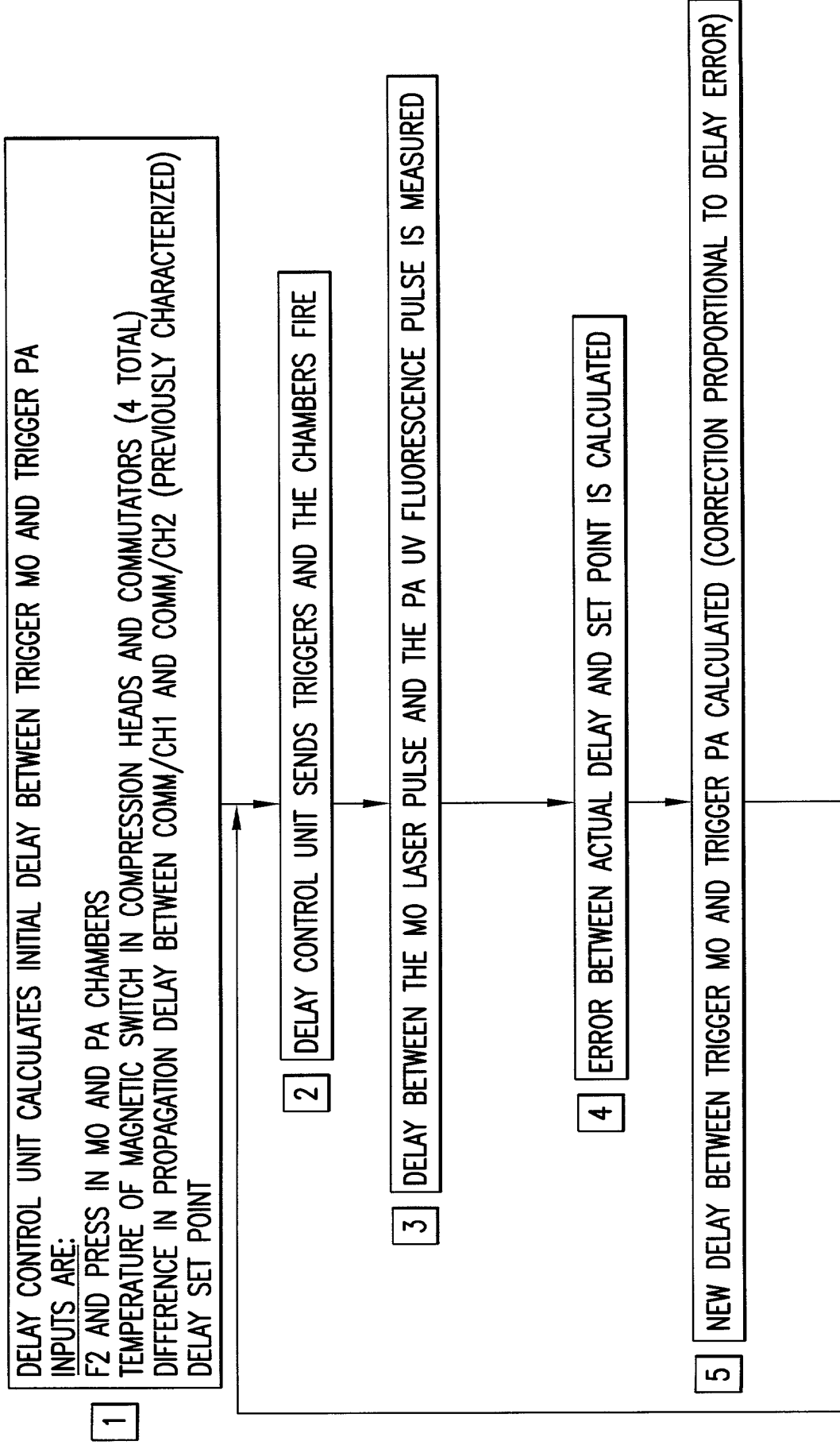


FIG.4B

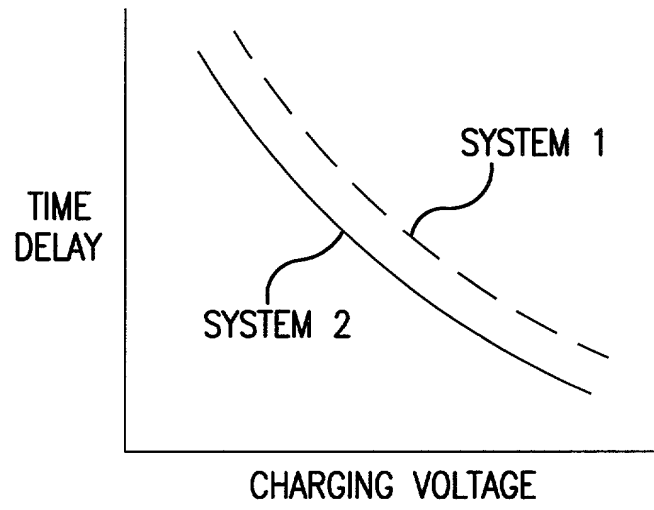


FIG.4C

```

graph TD
    START([START]) --> D1{HAS 1 MINUTE  
ELAPSED SINCE  
PA_T ?}
    D1 -- N --> S1[SET TD = TD_L]
    S1 --> D2{HAS LASER  
PULSE BEEN  
REQUESTED ?}
    D2 -- N --> D1
    D2 -- Y --> S2[TRIGGER MO  
RECORD  
MO_T  
START  
TIMER  
T_1]
    S2 --> D3{HAS TIME  
SINCE MO_T  
EXCEEDED  
TD ?}
    D3 -- Y --> S3[TRIGGER PA  
RECORD  
PA_T  
START  
TIMER  
T_2]
    S3 --> M1[MEASURE MO P-CELL]
    M1 --> D4{DOES MO P-CELL  
> THRESHOLD ?}
    D4 -- N --> D2
    D4 -- Y --> S4[STOP TIMER  
T_1 AND  
CALCULATE  
tau_MO]
    S4 --> M2[MEASURE PA P-CELL]
    M2 --> D5{DOES PA P-CELL  
> THRESHOLD ?}
    D5 -- N --> D2
    D5 -- Y --> S5[STOP TIMER  
T_2 AND  
CALCULATE  
tau_PA]
    S5 --> S6[CALCULATE  
TD_LAST  
TD_L = tau_MO - tau_PA + [NORMAL  
TARGET  
DELAY]]
    S6 --> D1

```

**FIG.4D**

NORMAL TARGET DELAY = 30ns (CONFIGURABLE)

NORMAL  
TARGET = 30ns  
DELAY (CONFIGURABLE)

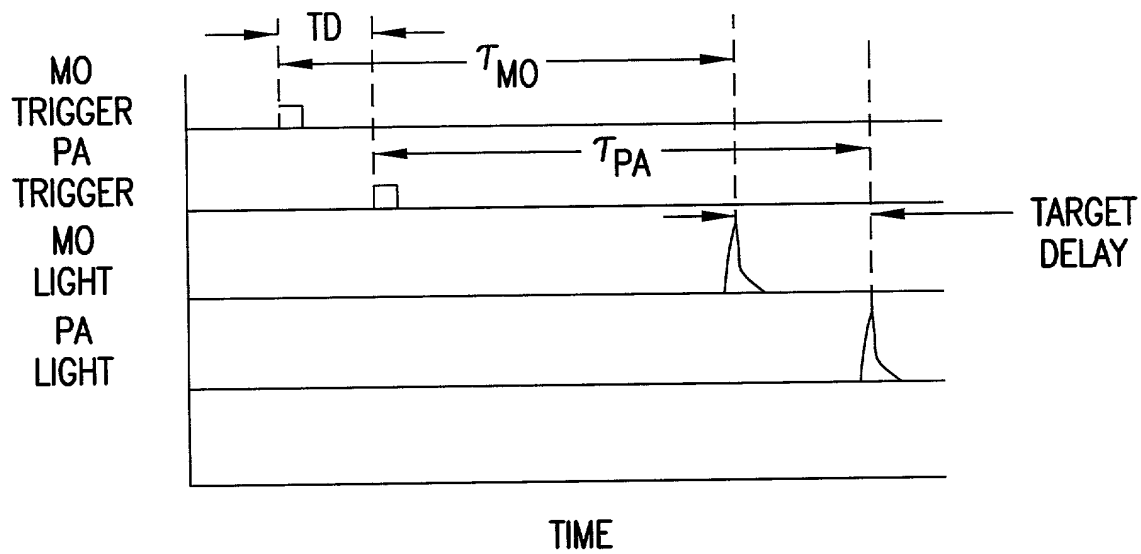
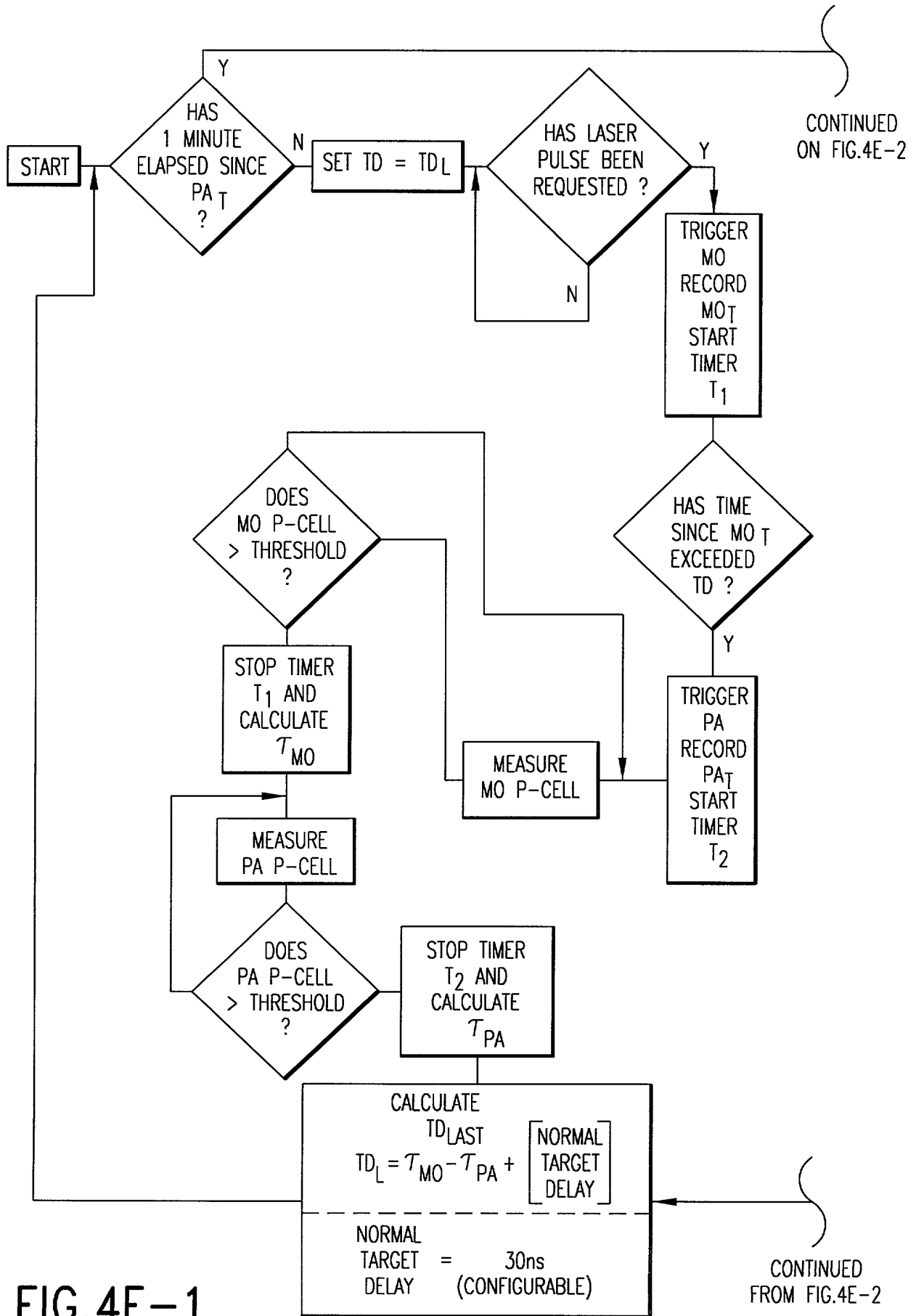


FIG.4D1



CONTINUED  
FROM FIG.4E-1

N

HAS LASER  
PULSE BEEN  
REQUESTED ?

Y

TRIGGER  
PA  
RECORD  
 $PA_T$   
START  
TIMER  
 $T_2$

HAS  
ELAPSED  
TIME SINCE  $PA_T$   
EXCEEDED  
40ns ?

TRIGGER  
MO  
RECORD  
 $MO_T$   
START  
TIMER  
 $T_1$

MEASURE  
PA P-CELL

DOES  
PA P-CELL  
> THRESHOLD  
?

STOP TIMER  
 $T_2$  AND  
CALCULATE  
 $\tau_{PA}$

STOP TIMER  
 $T_1$  AND  
CALCULATE  
 $\tau_{MO}$

DOES  
MO P-CELL  
> THRESHOLD  
?

MEASURE  
MO P-CELL

CONTINUED  
ON FIG.4E-1

FIG.4E-2

202406090000

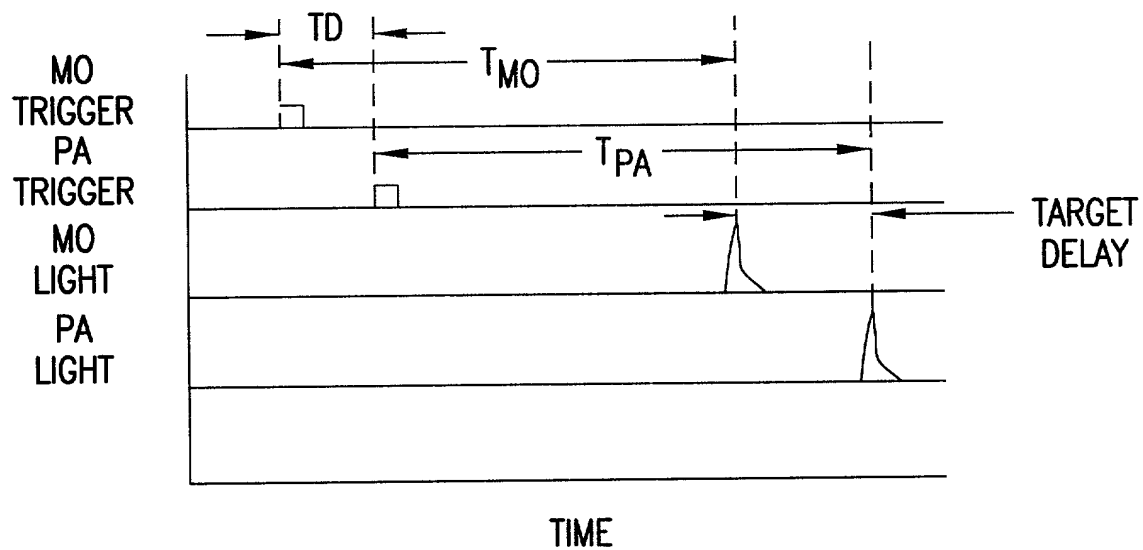


FIG.4E-3

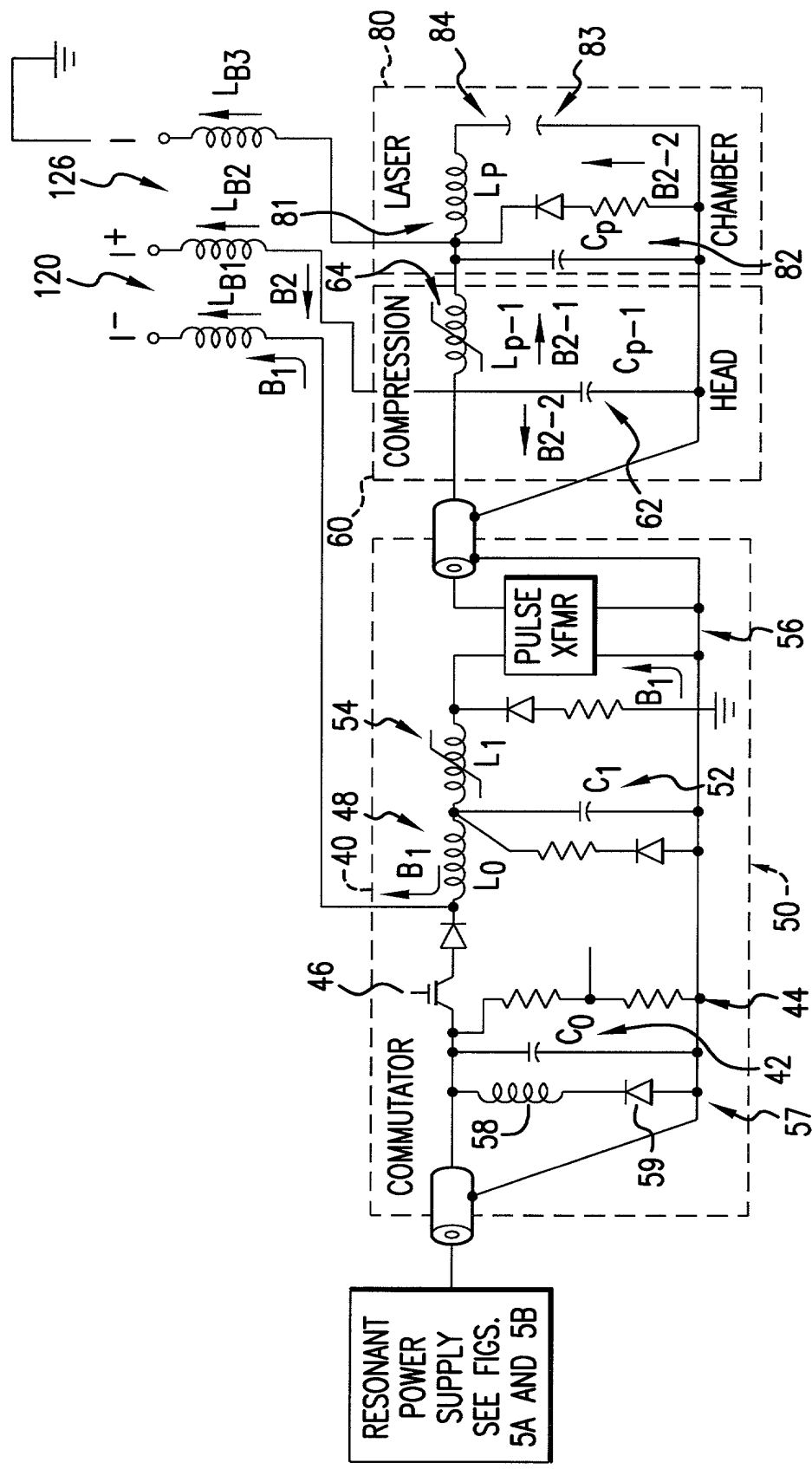


FIG.5A



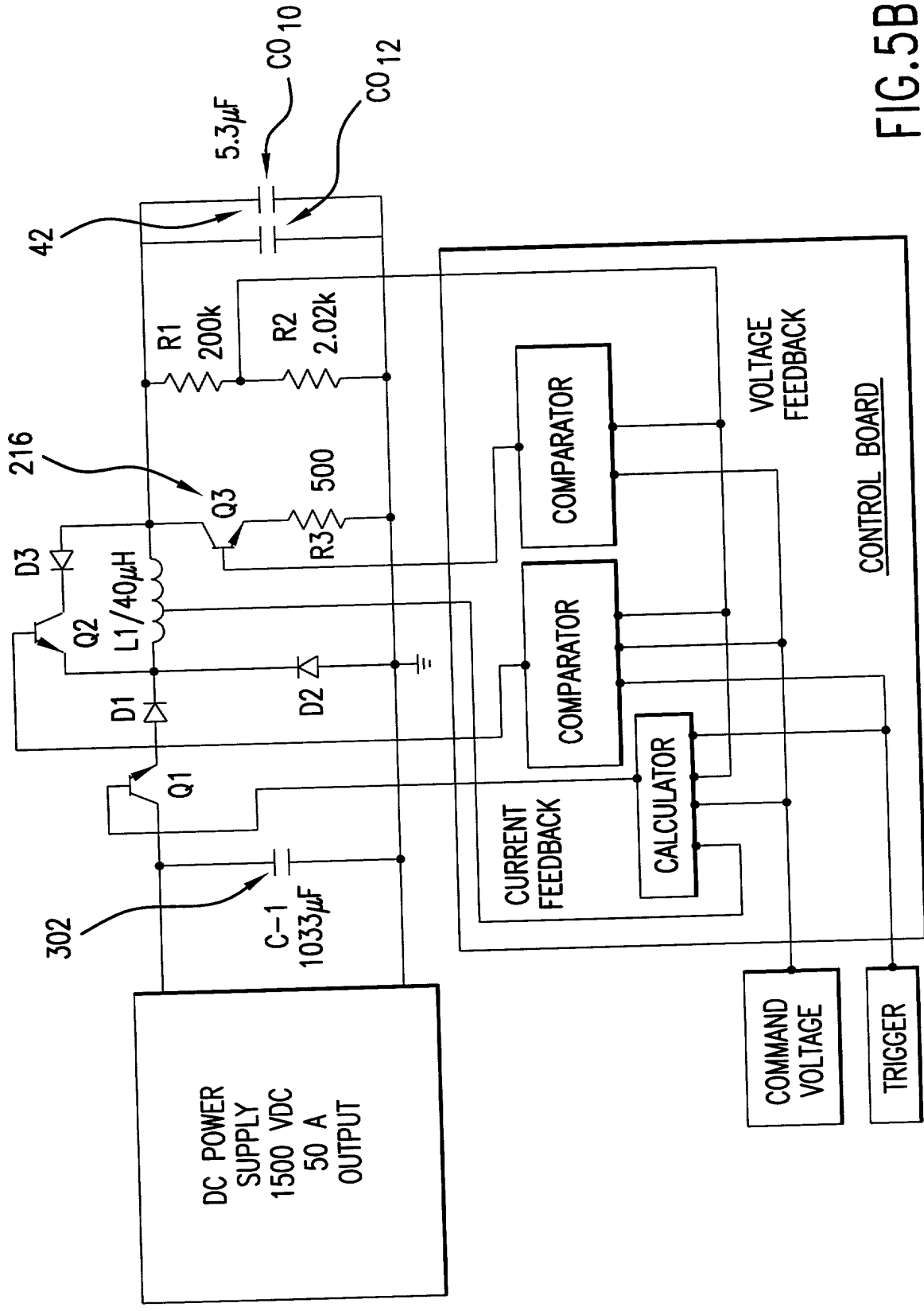


FIG.5B

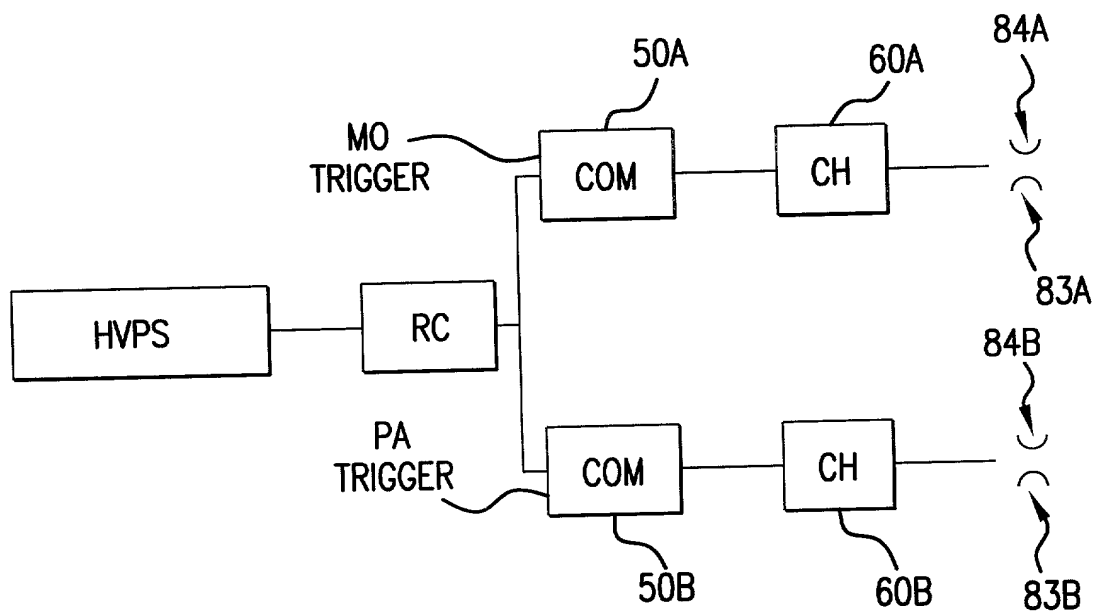


FIG.5C1

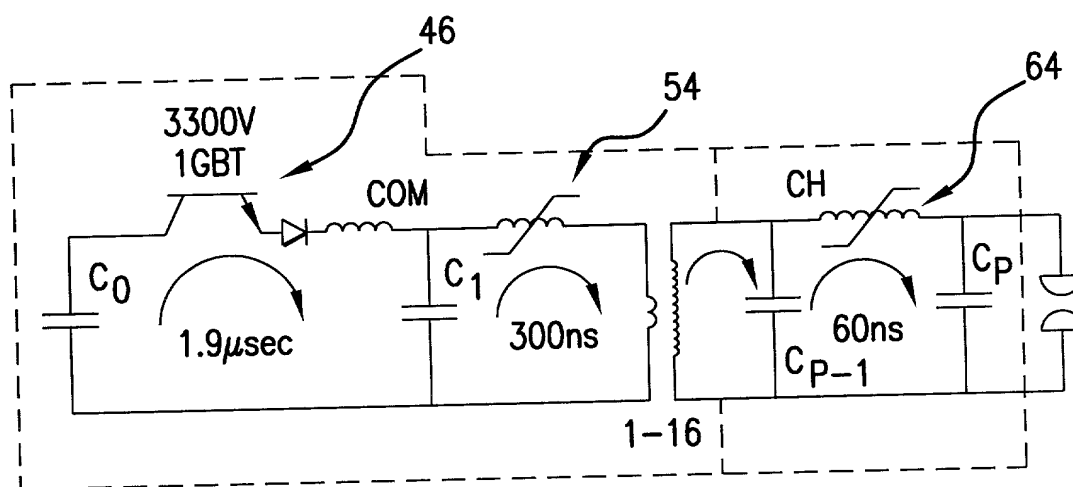


FIG.5C2

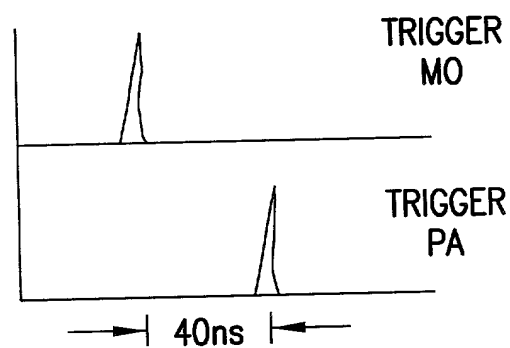


FIG.5C3

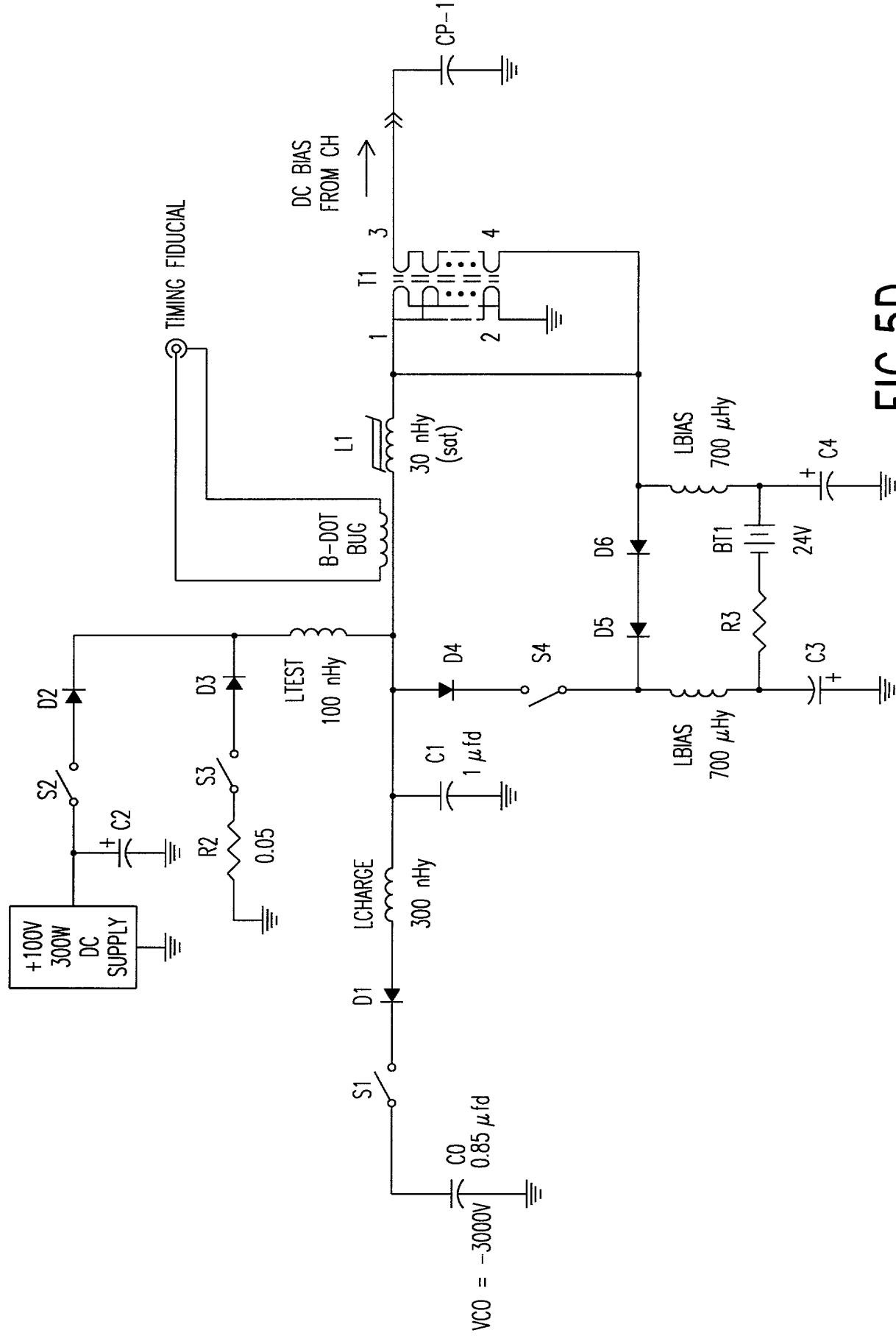


FIG.5D

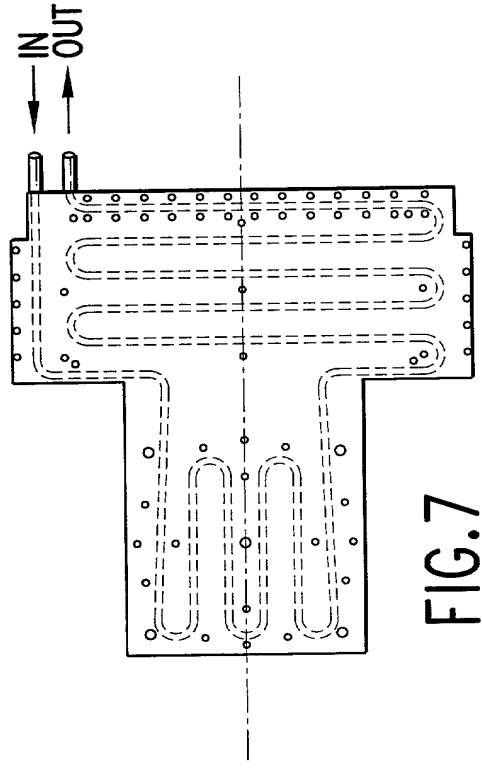


FIG. 7

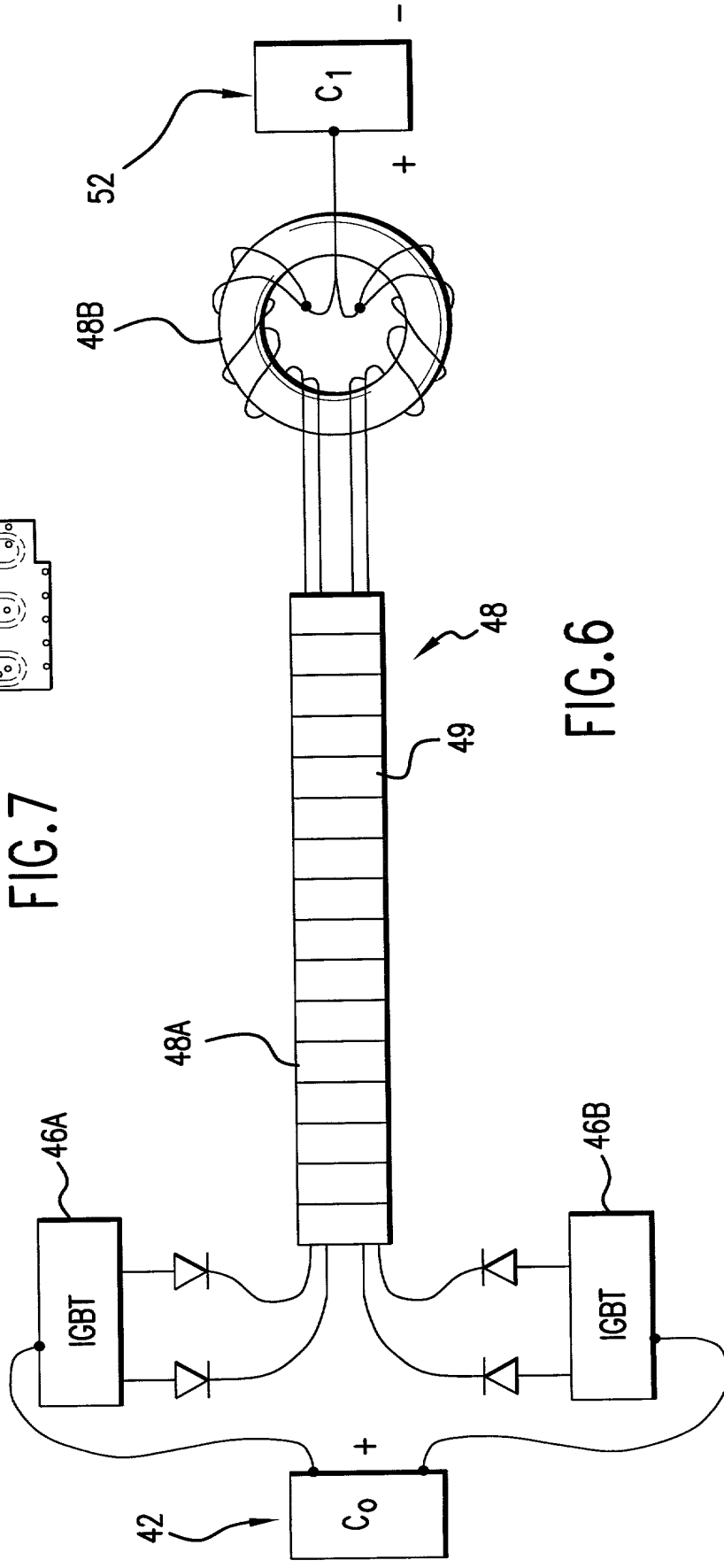


FIG. 6

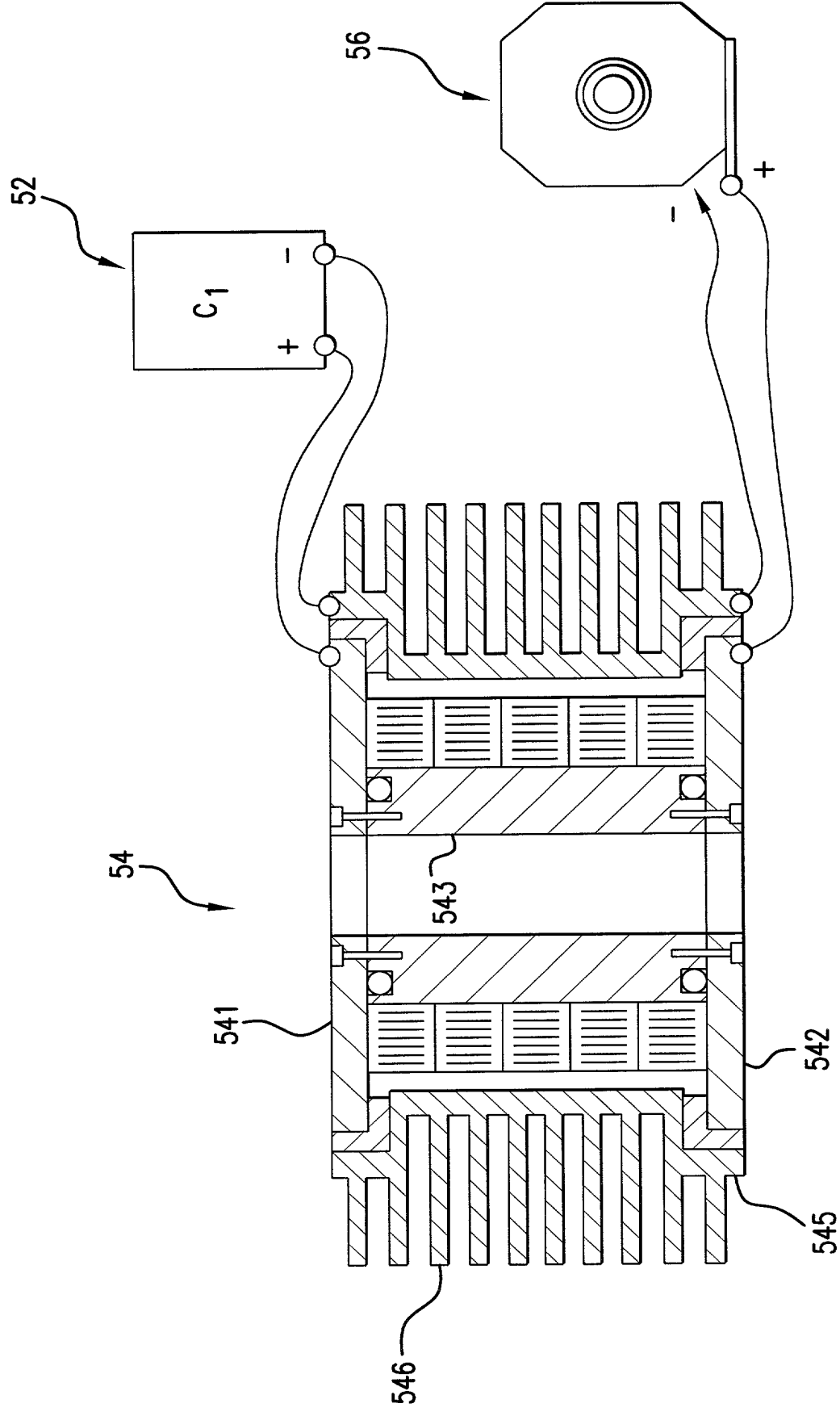


FIG.8

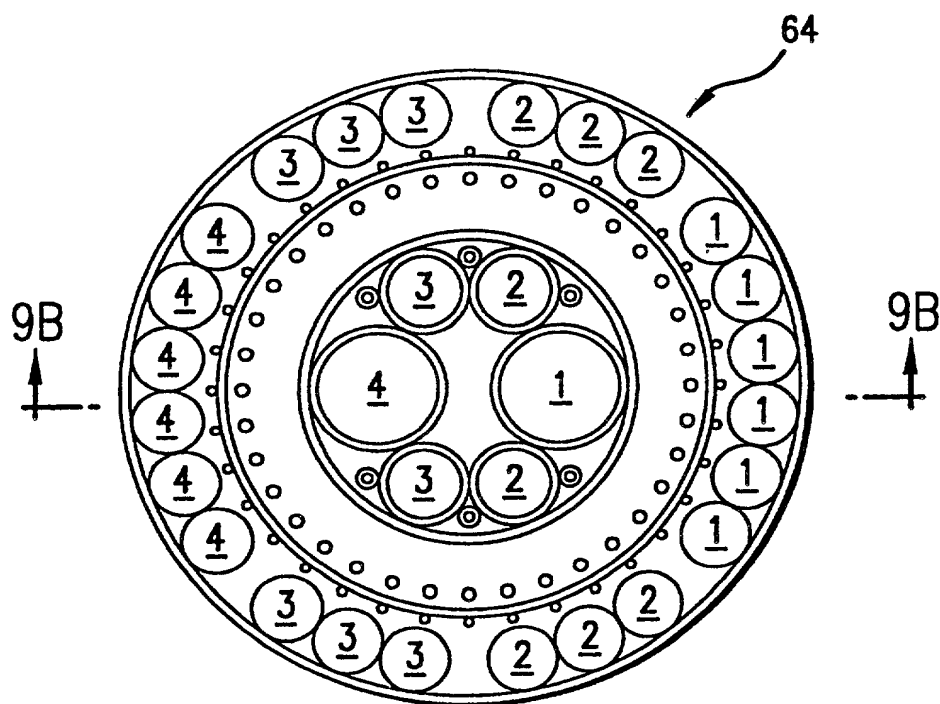


FIG. 9A

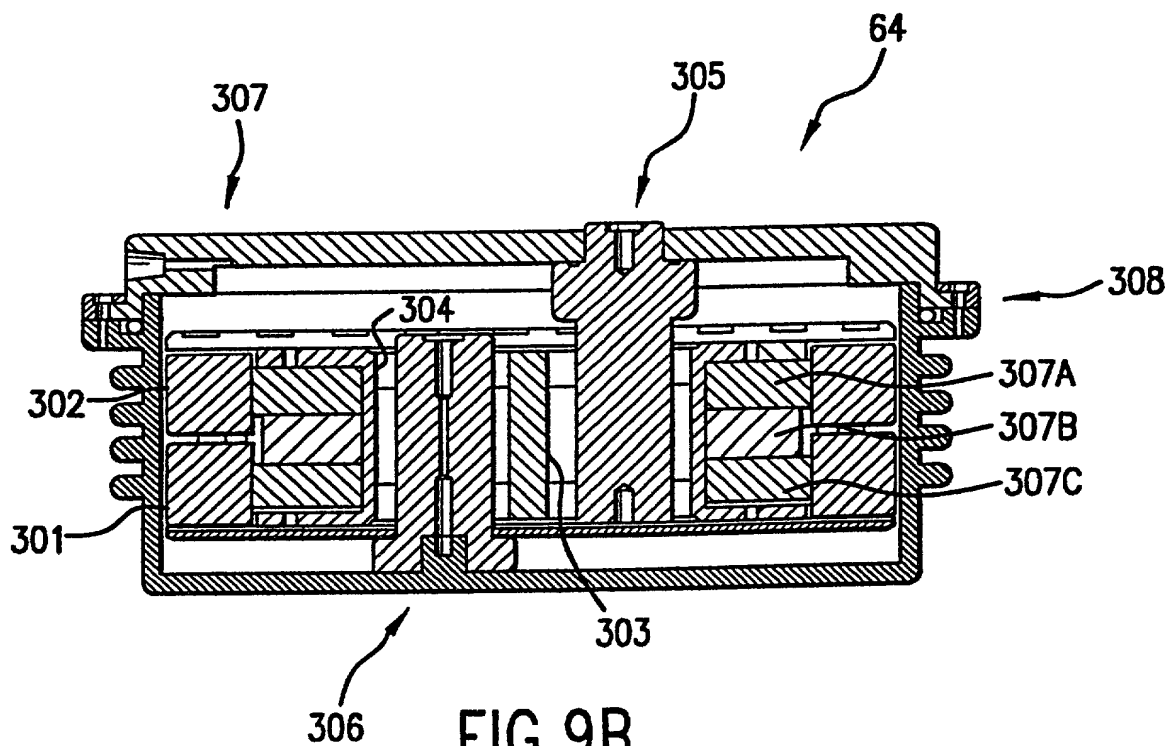


FIG. 9B

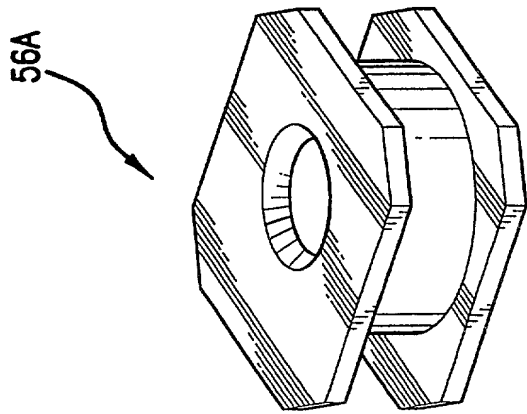
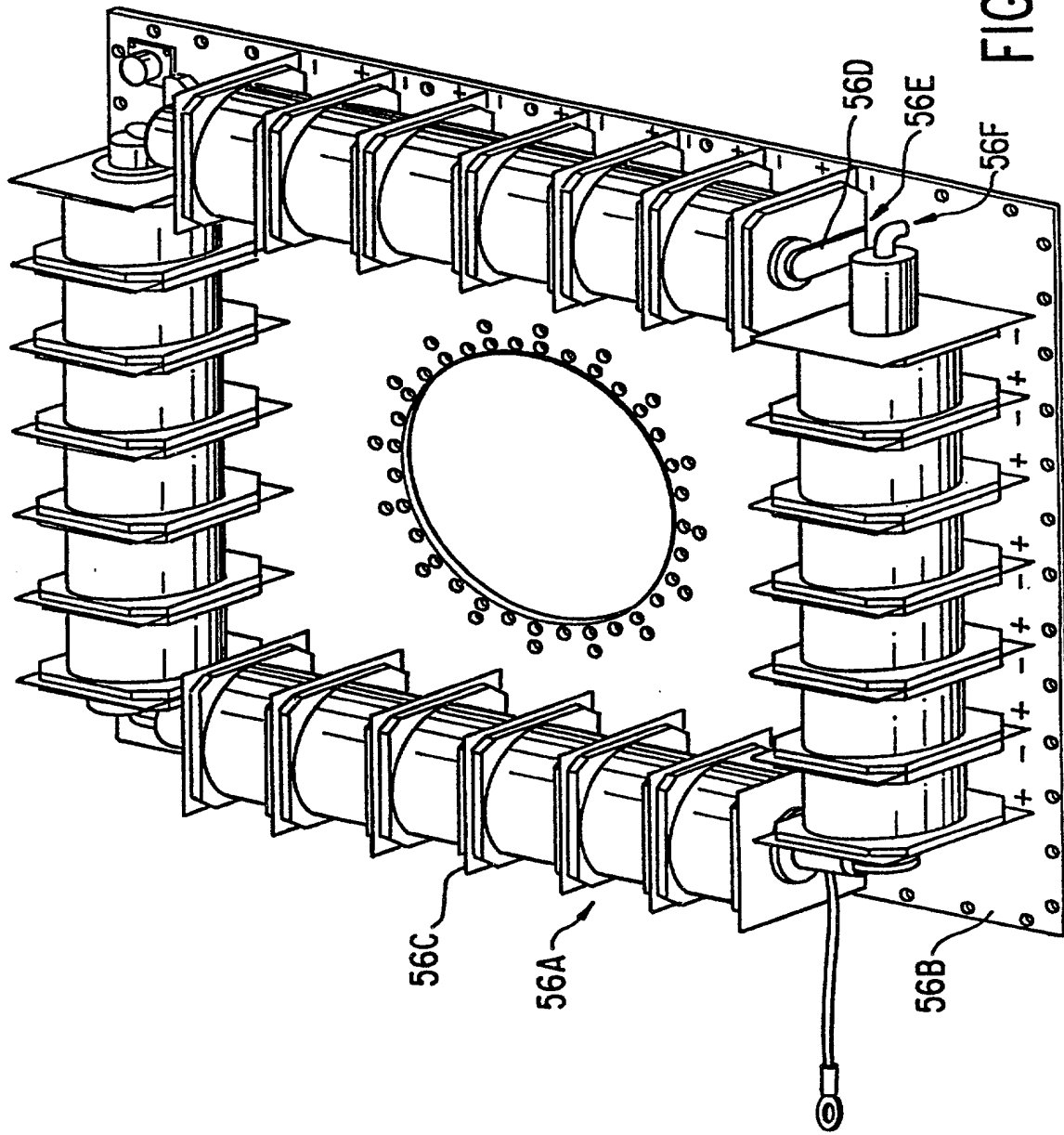


FIG. 10A

FIG. 10

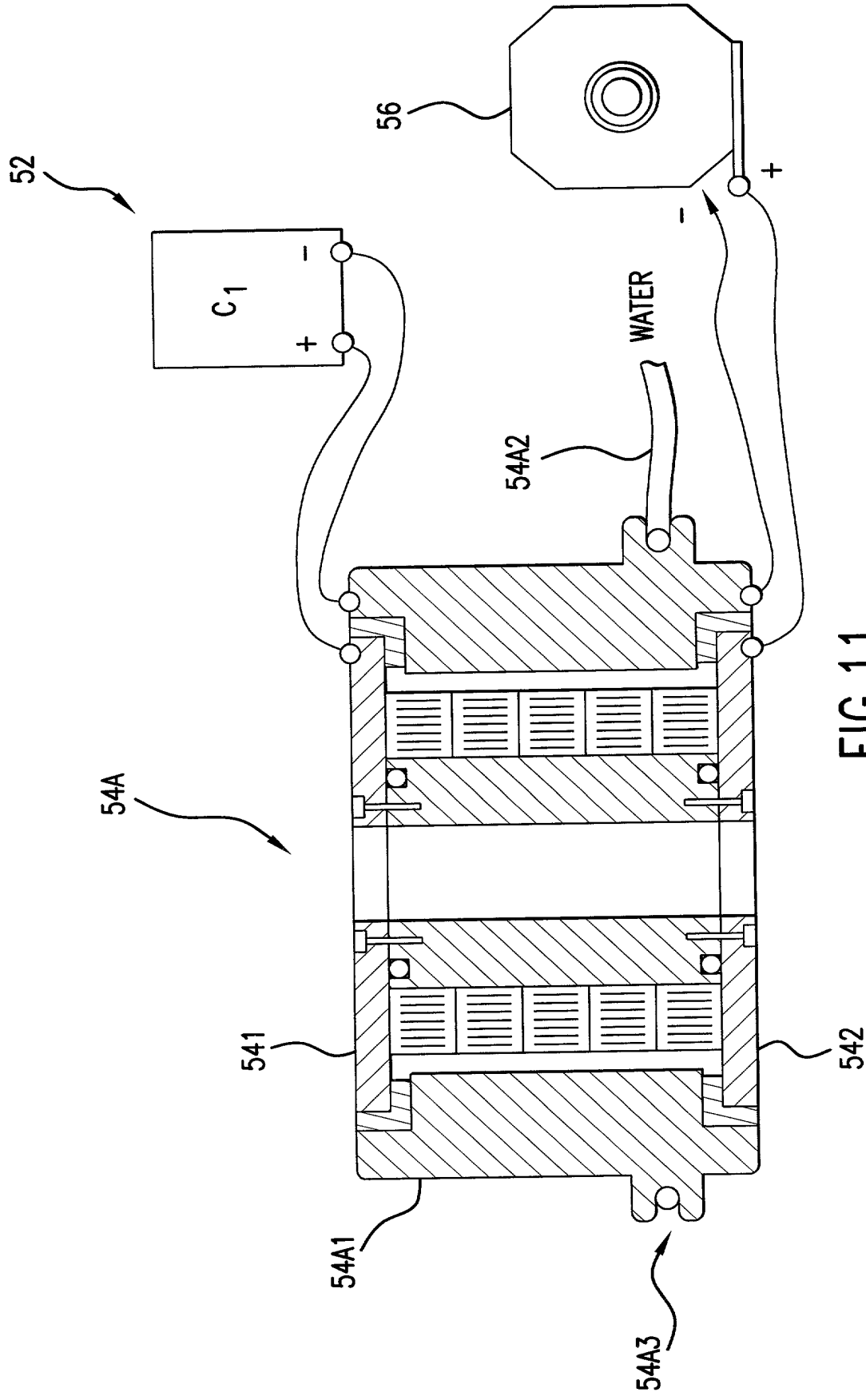
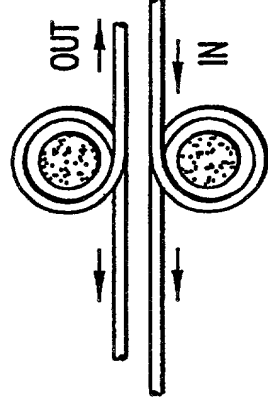
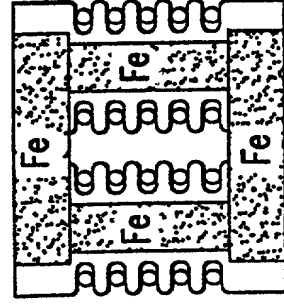
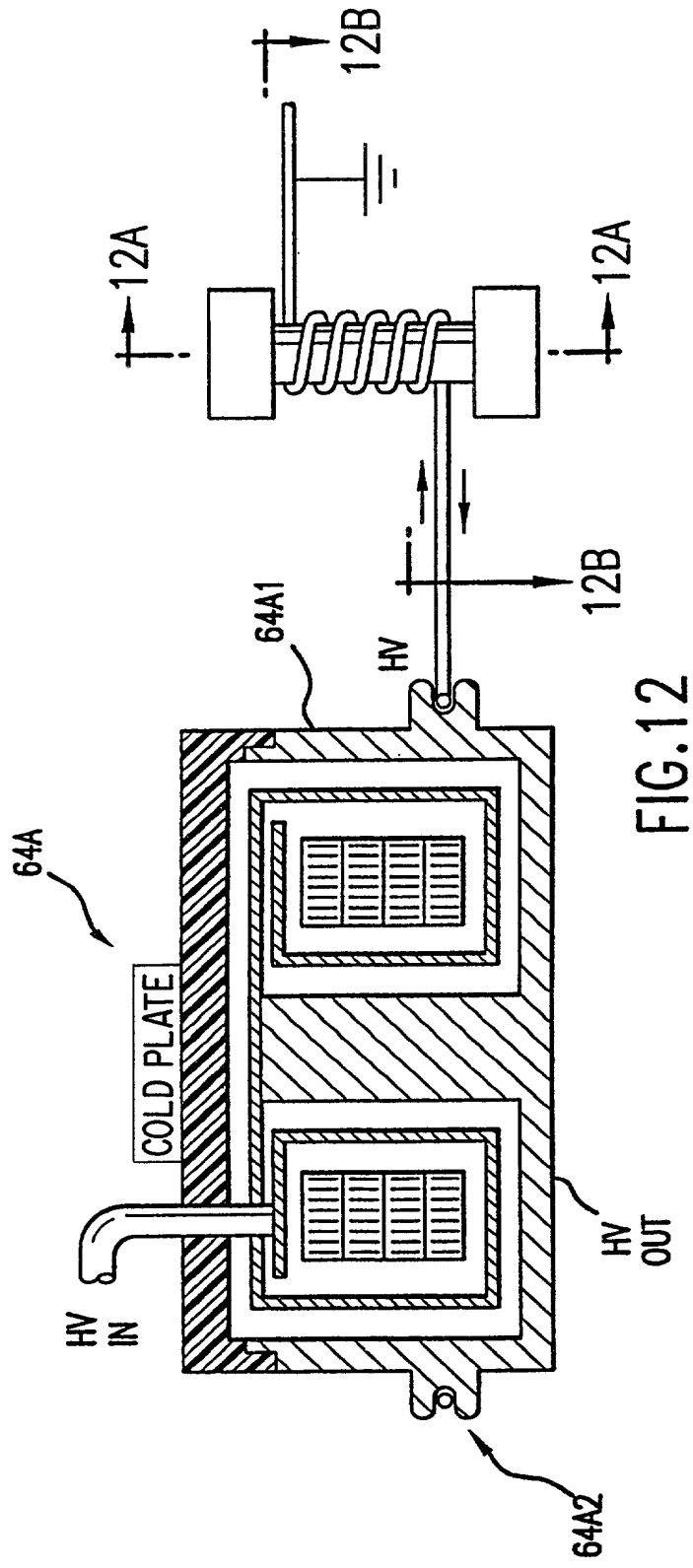


FIG.11





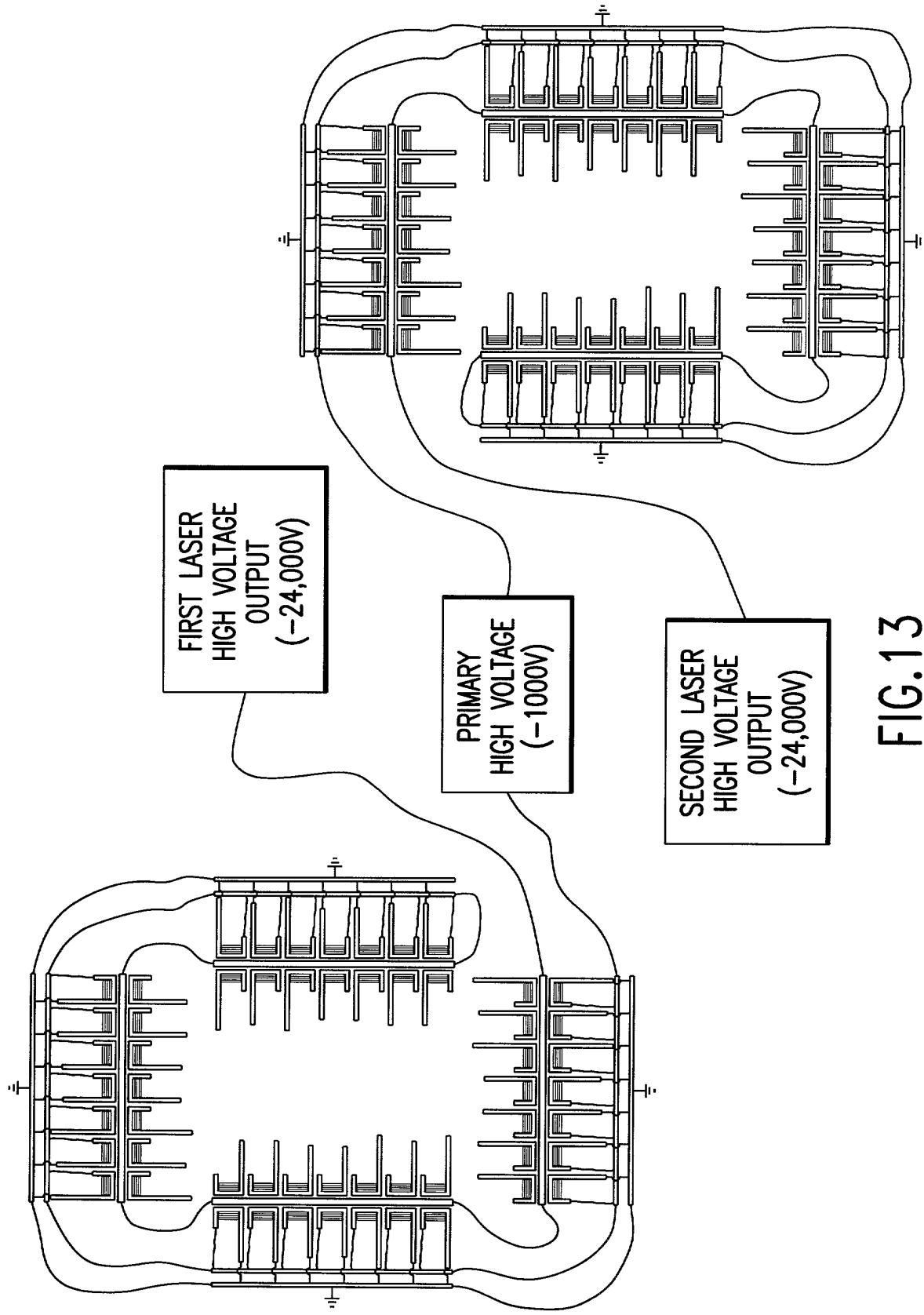


FIG.13

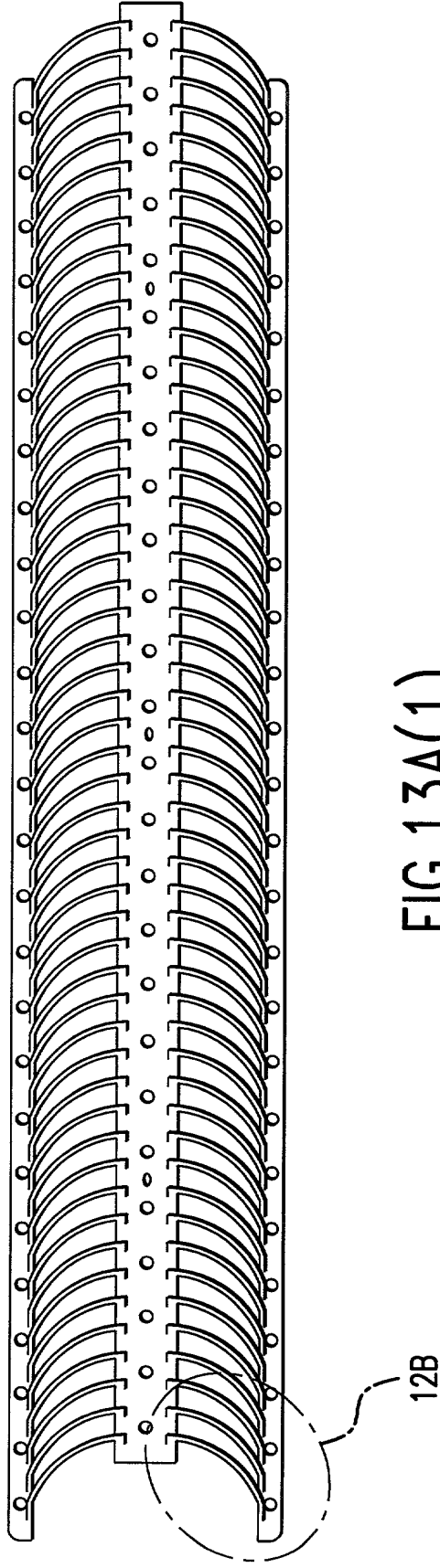


FIG. 13A(1)

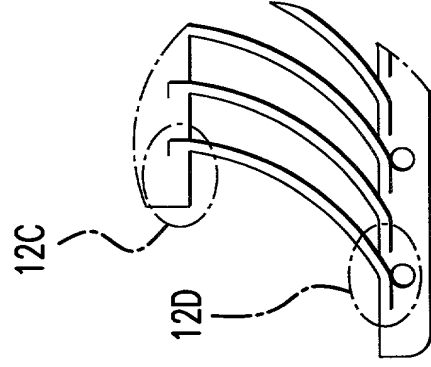


FIG. 13A(2)

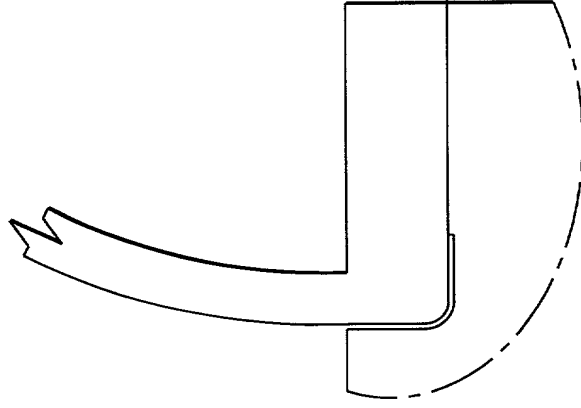


FIG. 13A(3)

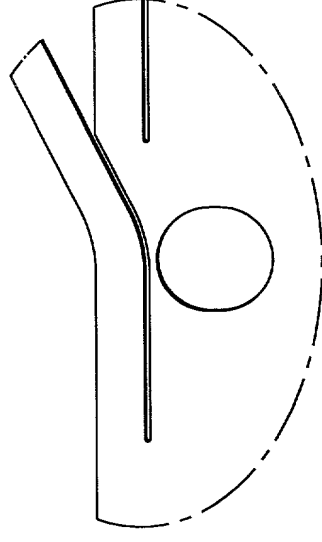


FIG. 13A(4)

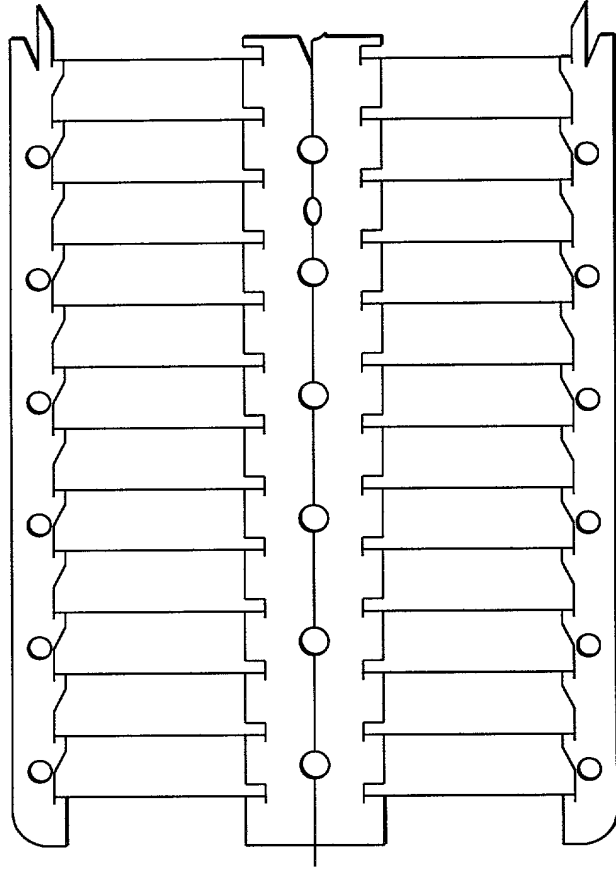


FIG. 13A(5)

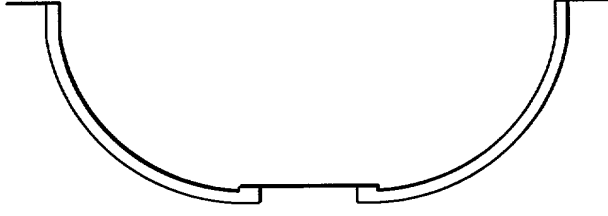
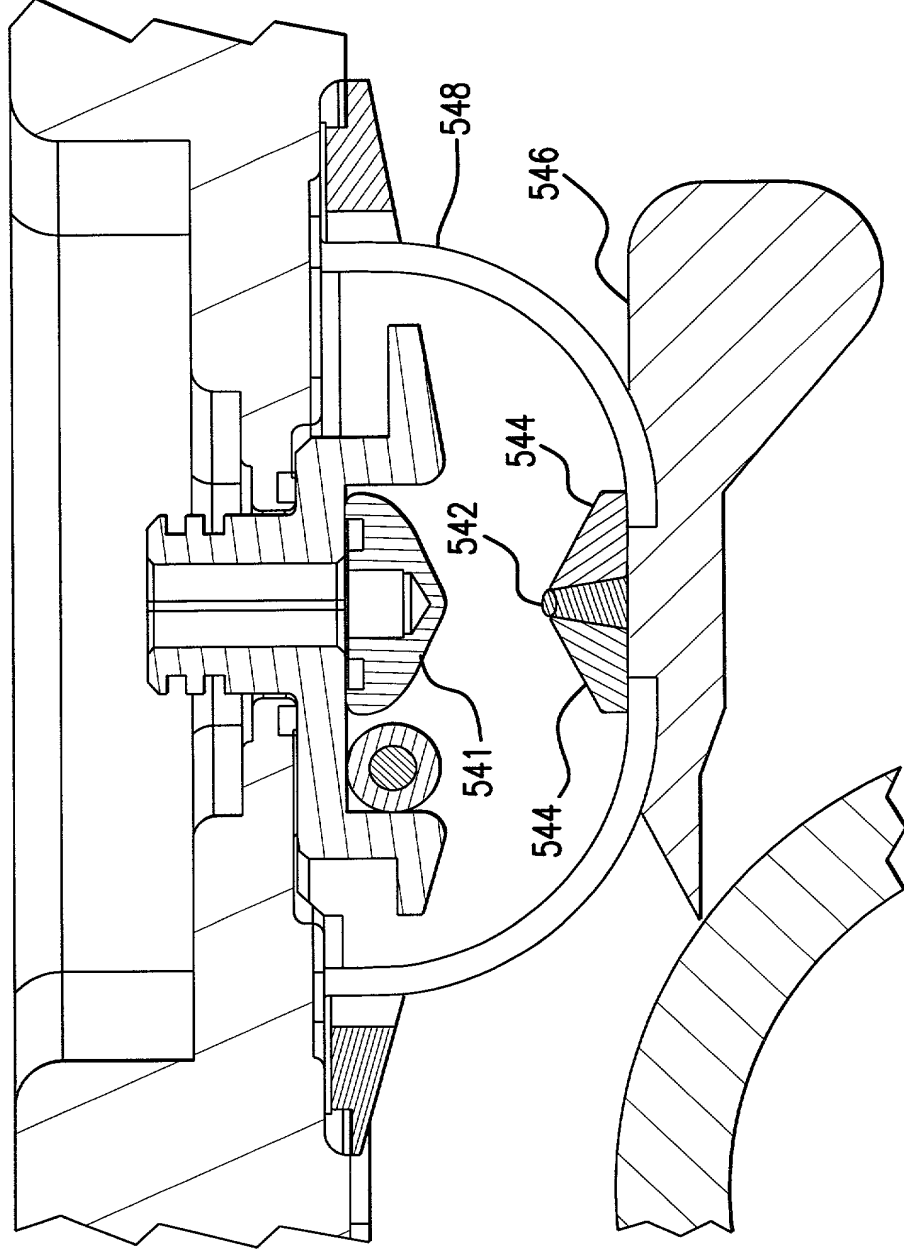


FIG. 13A(6)



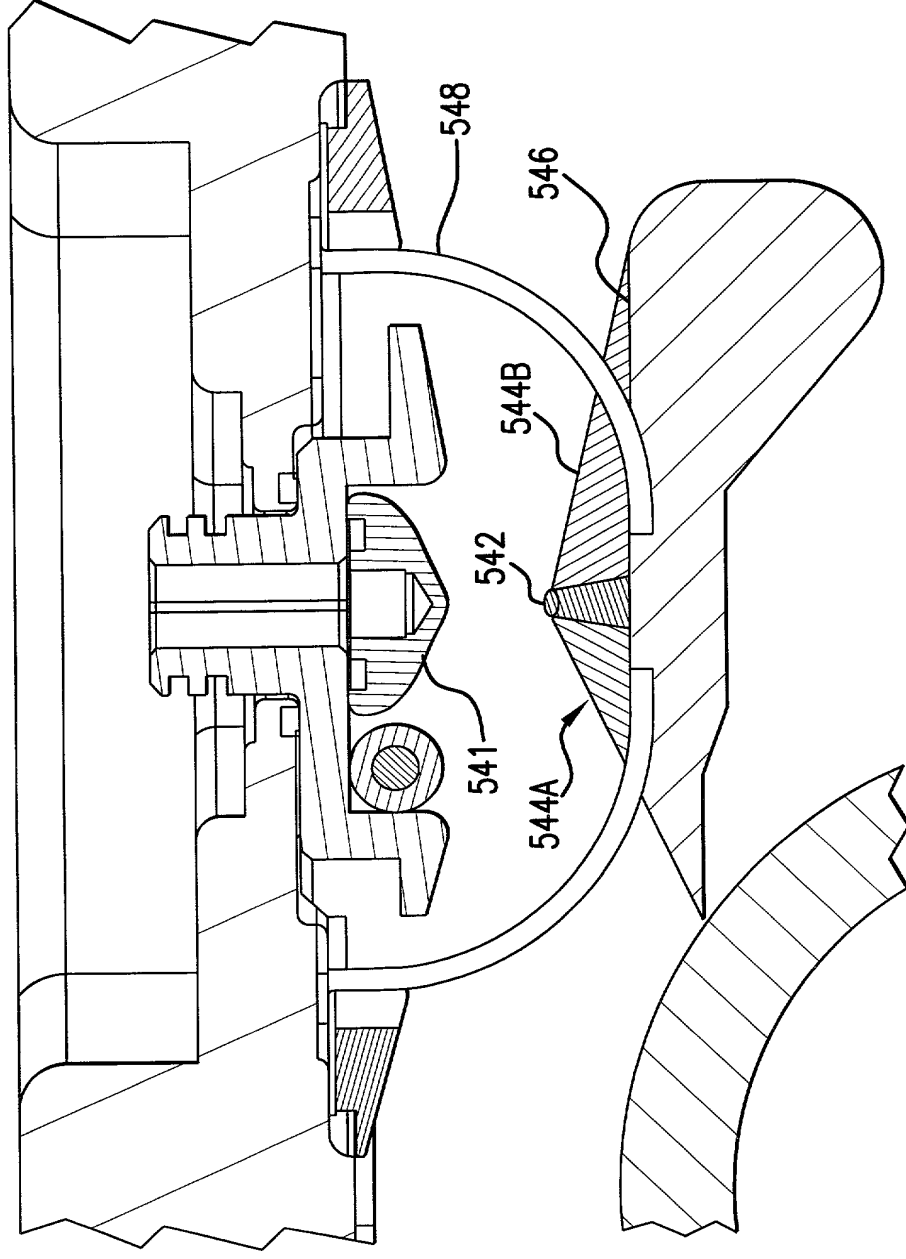
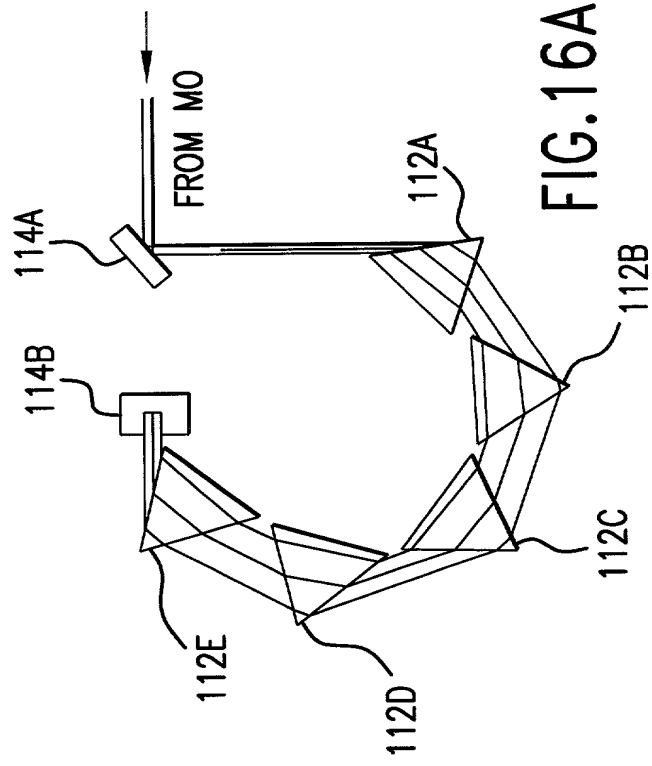
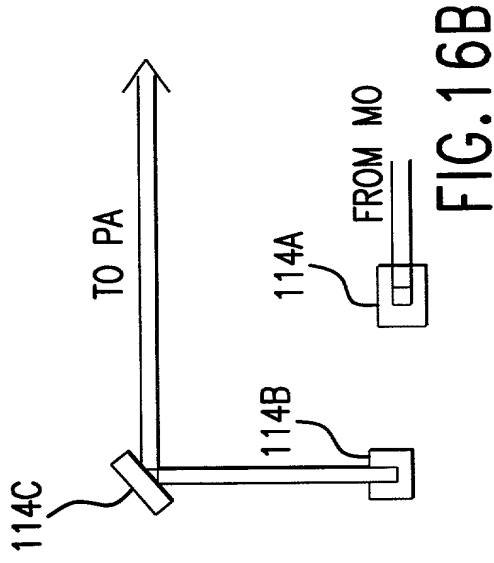
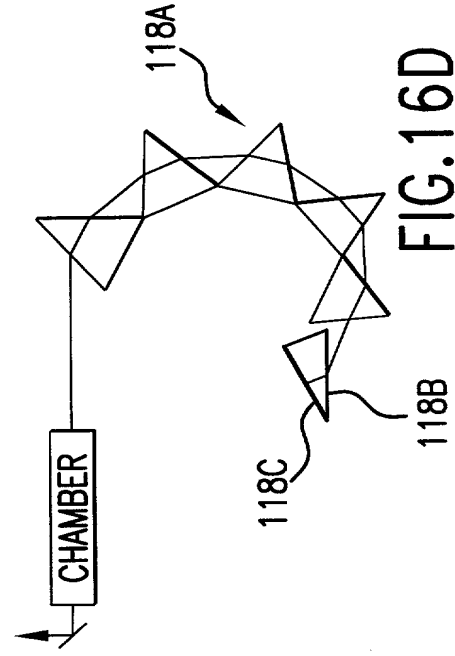
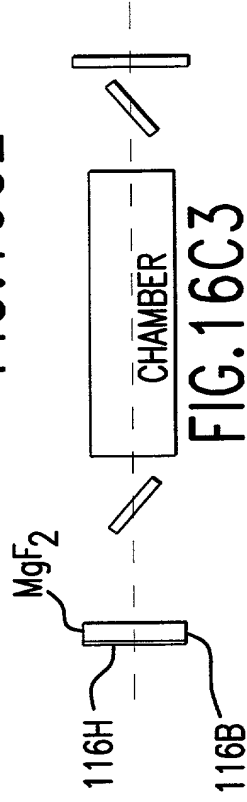
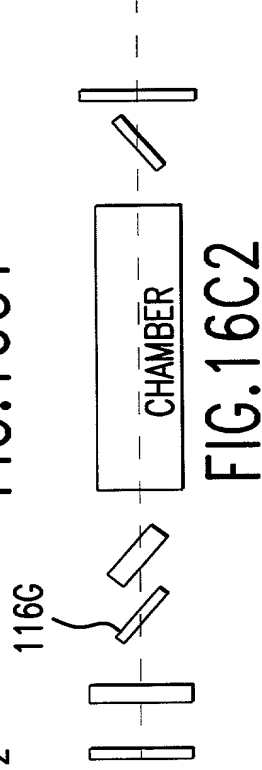
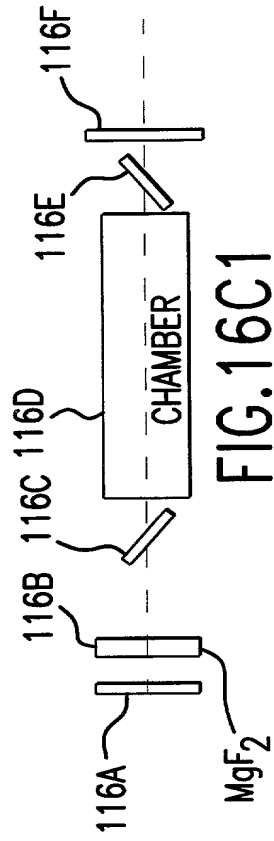
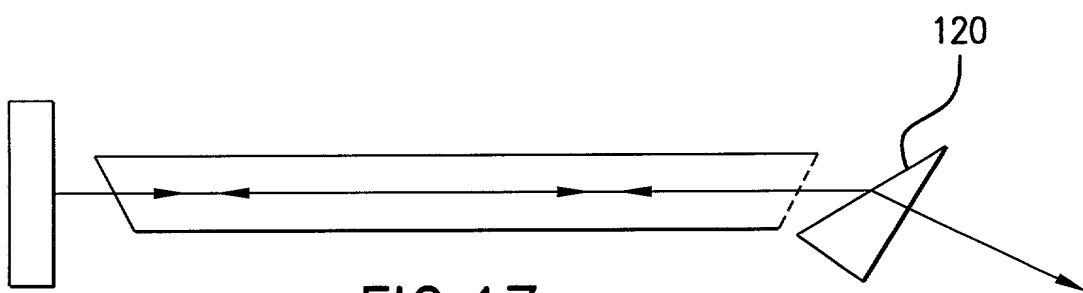
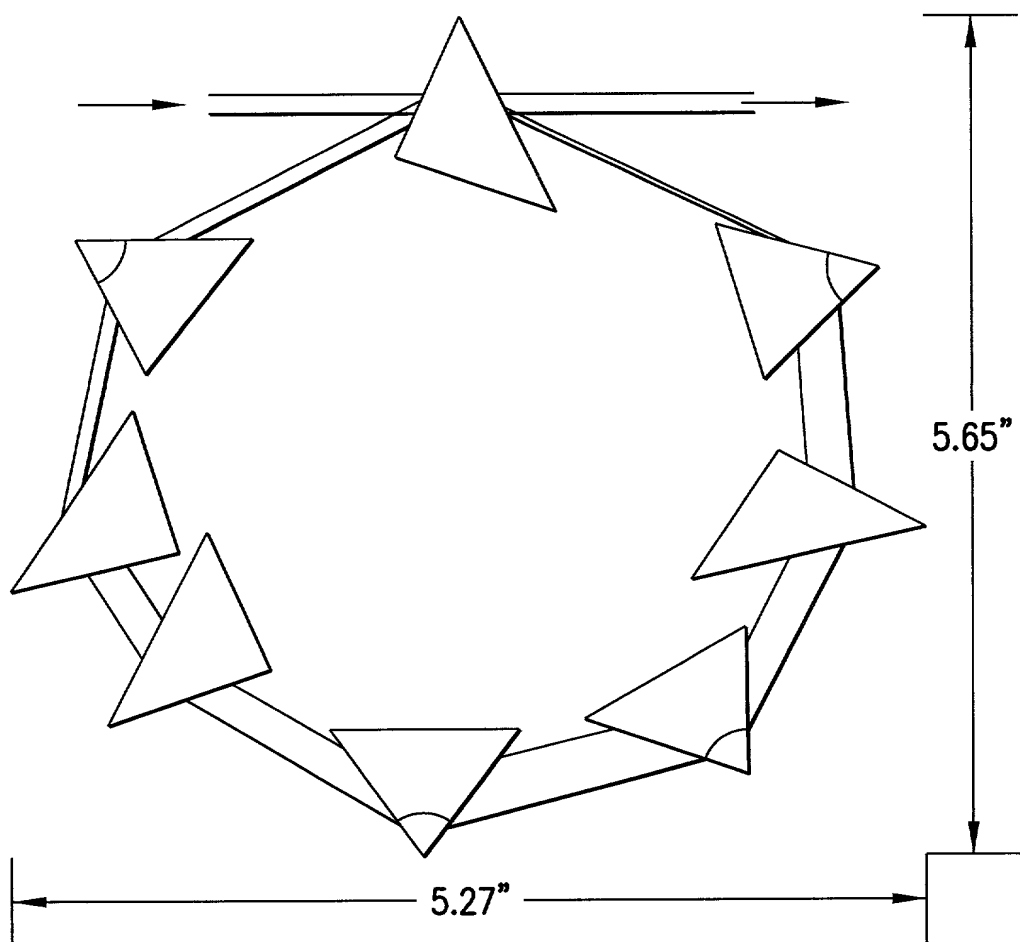


FIG. 15







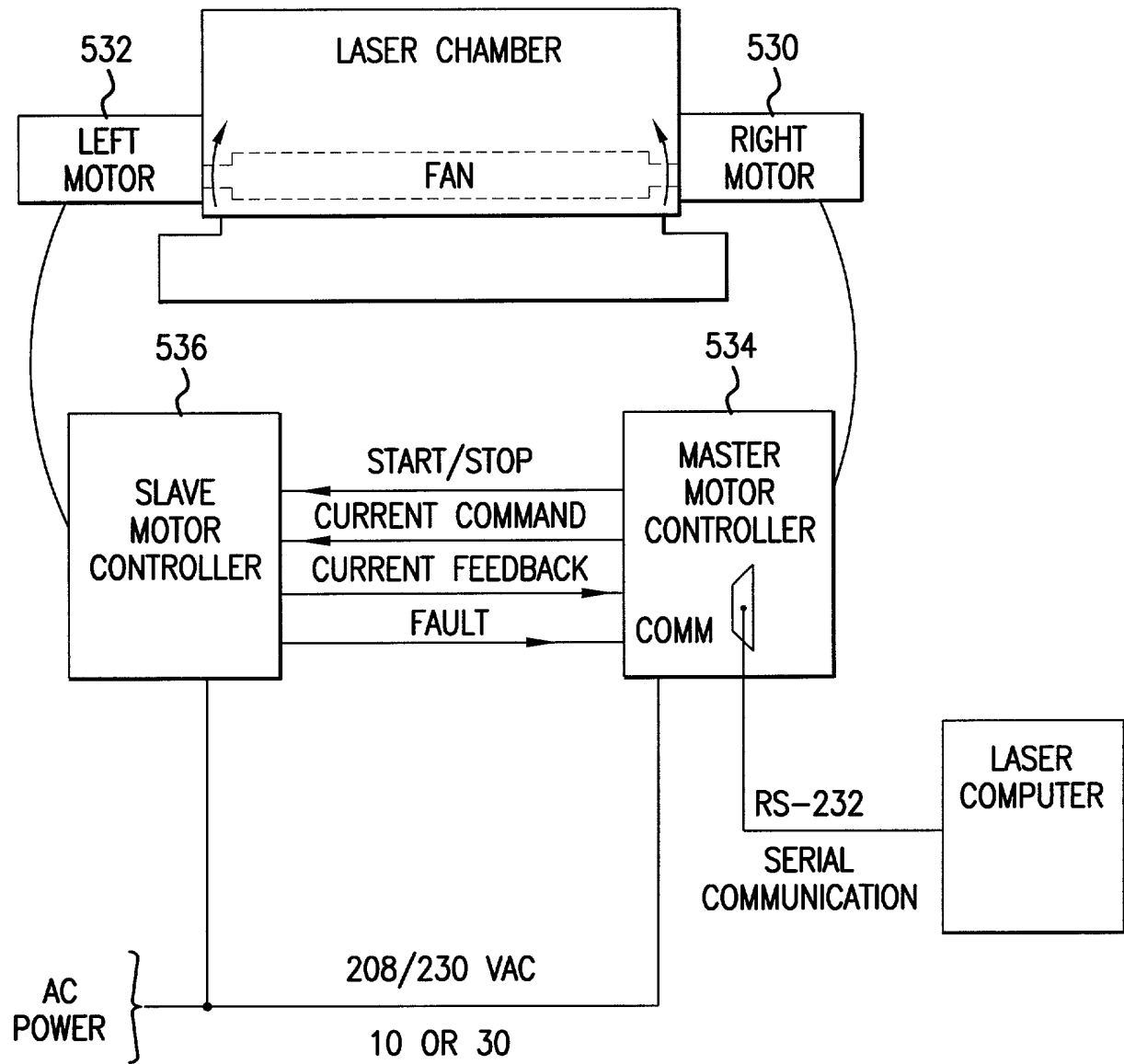


FIG. 18

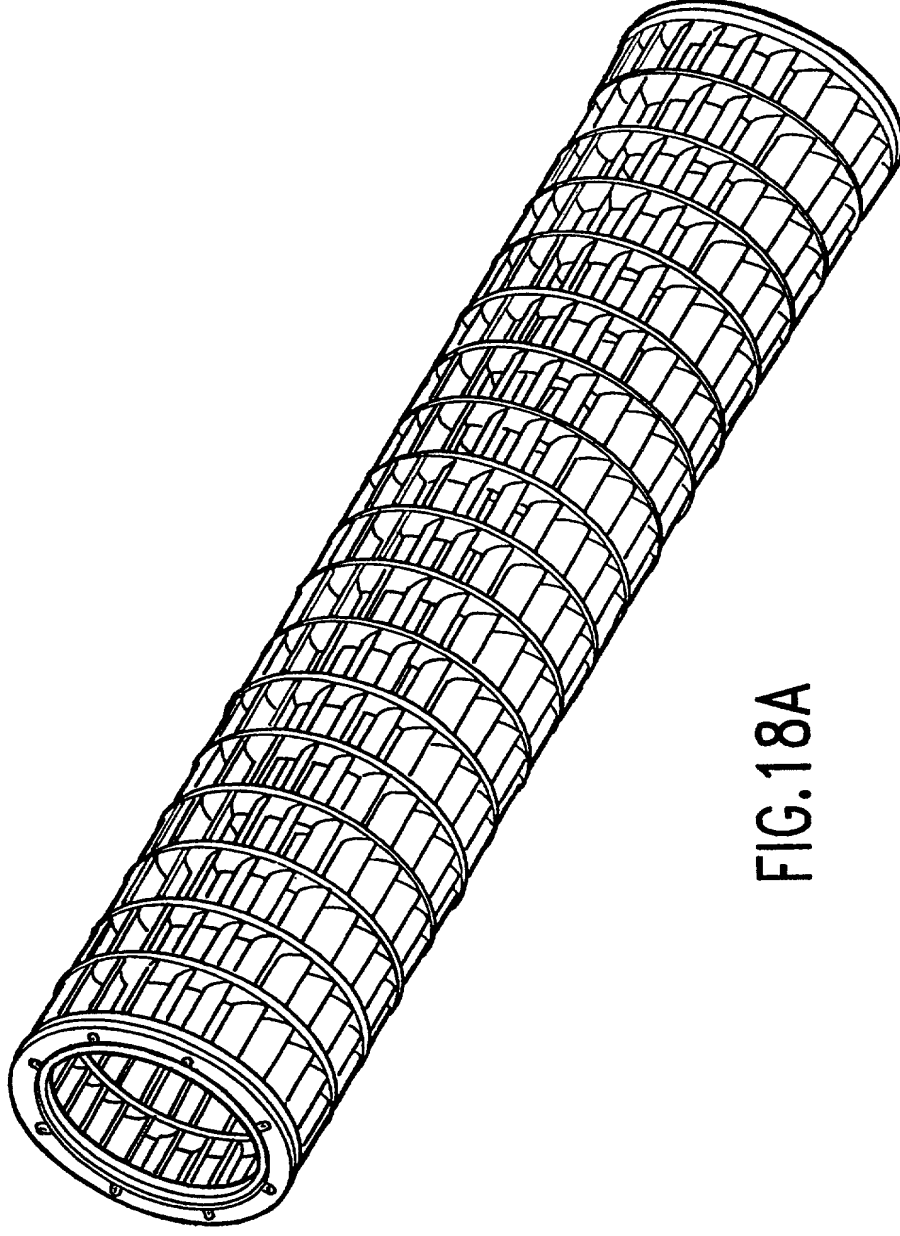


FIG.18A

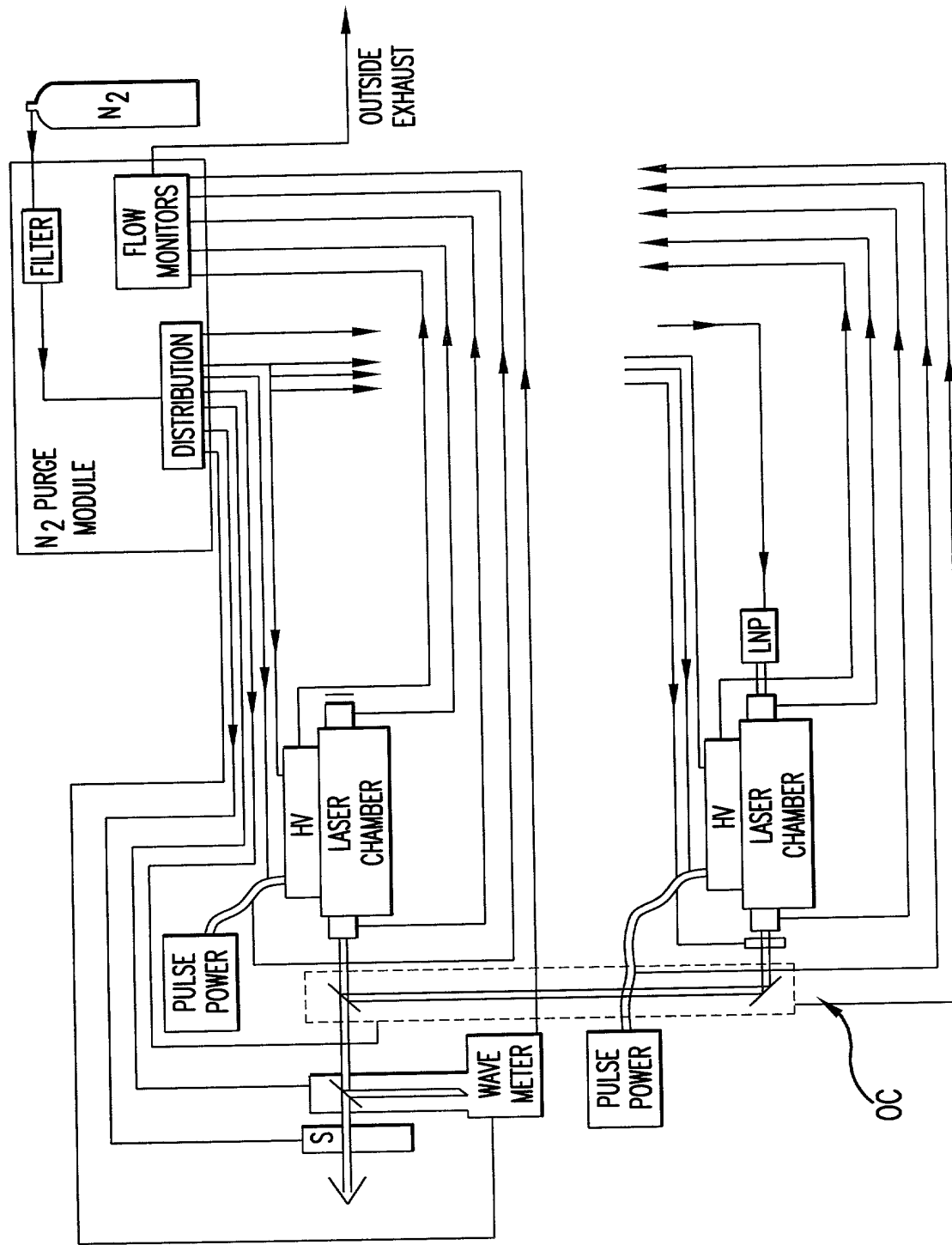
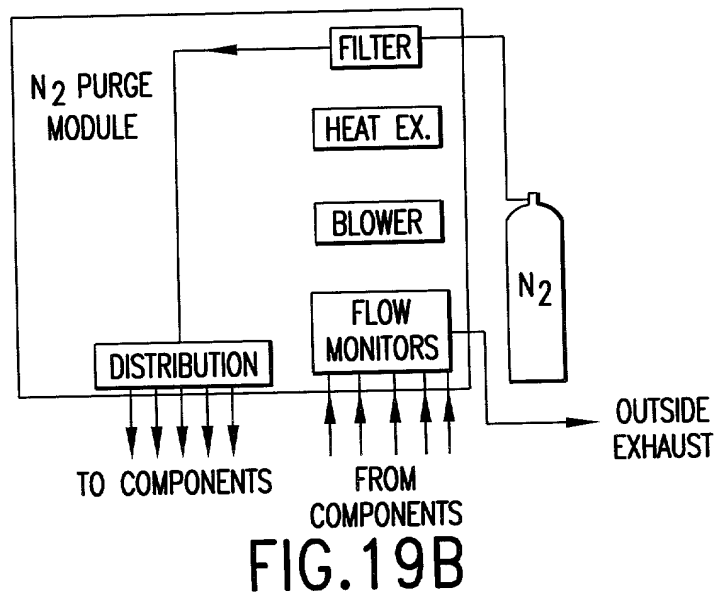
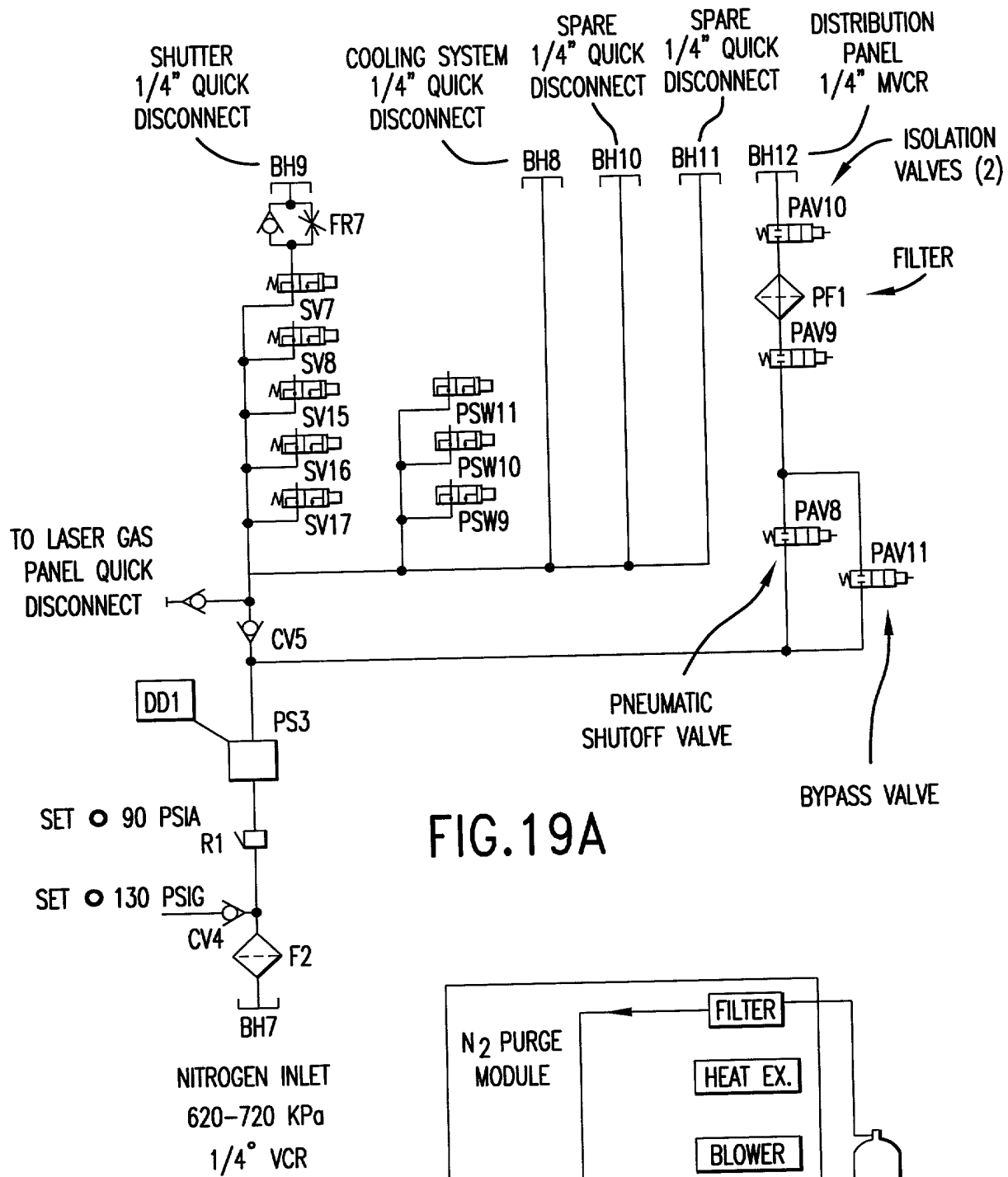


FIG. 19



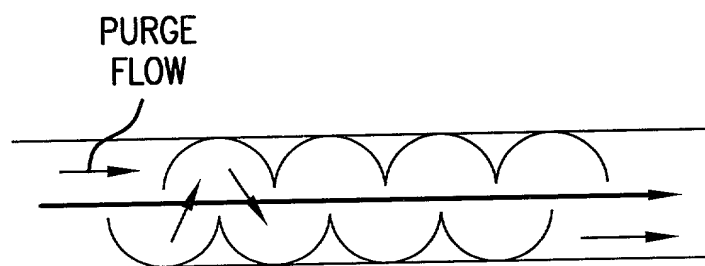


FIG.19C1

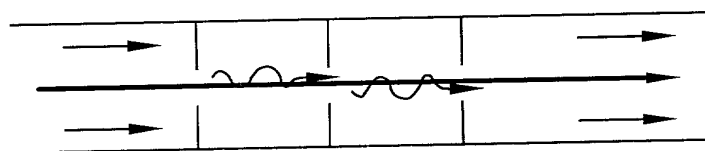


FIG.19C2

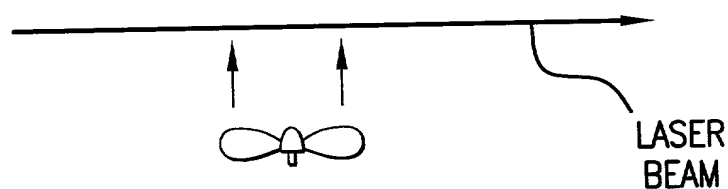


FIG.19C3

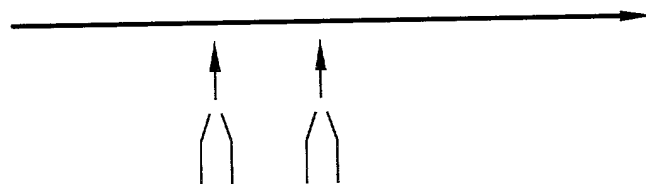


FIG.19C4

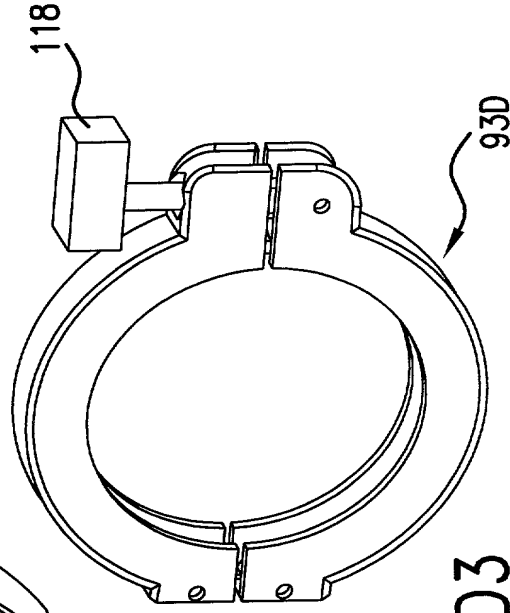
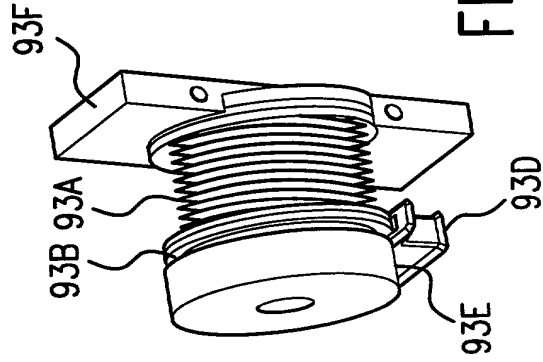
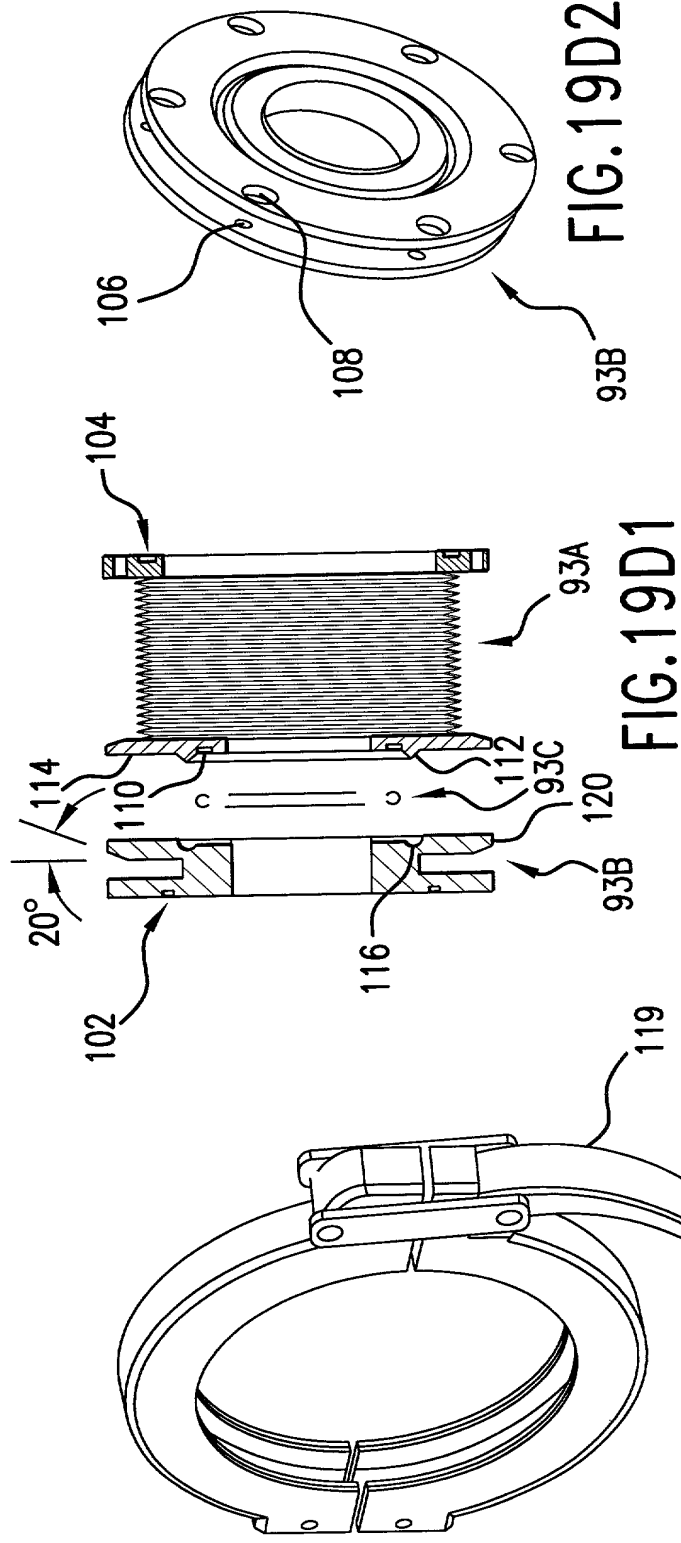


FIG. 19D5

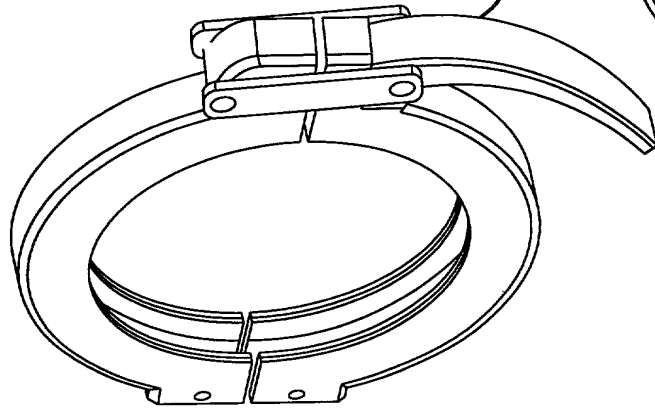
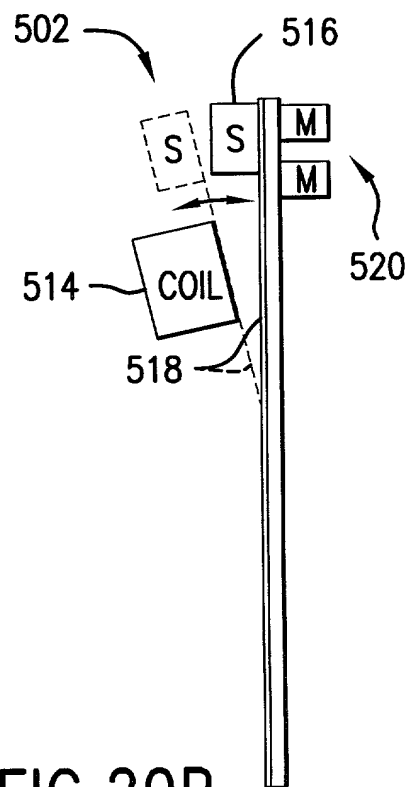
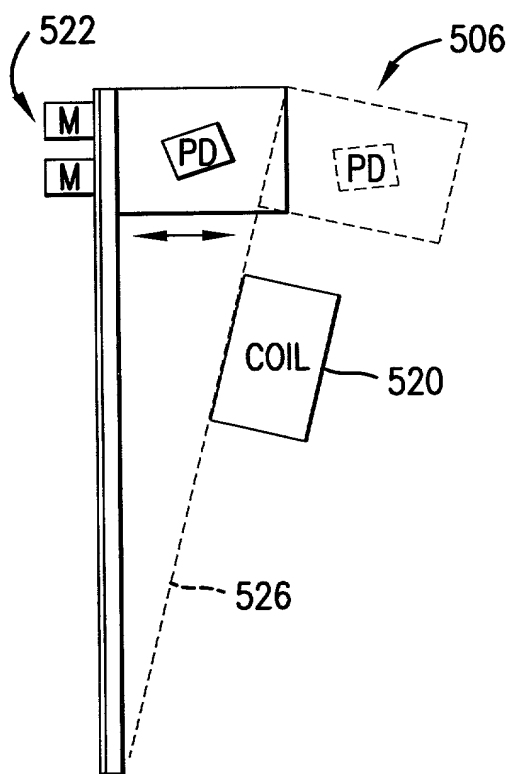
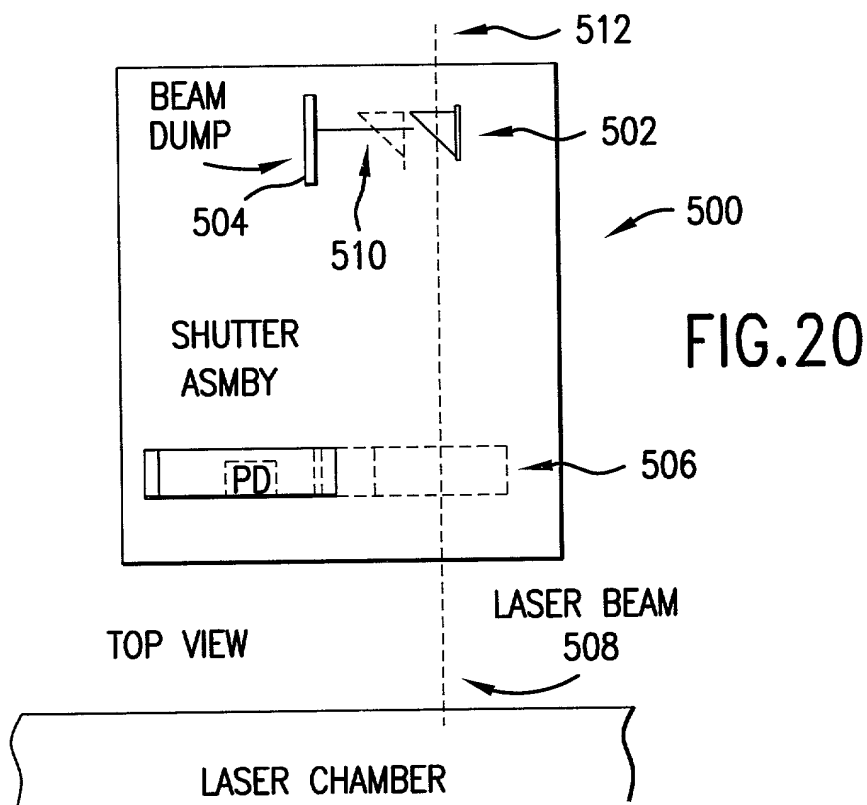
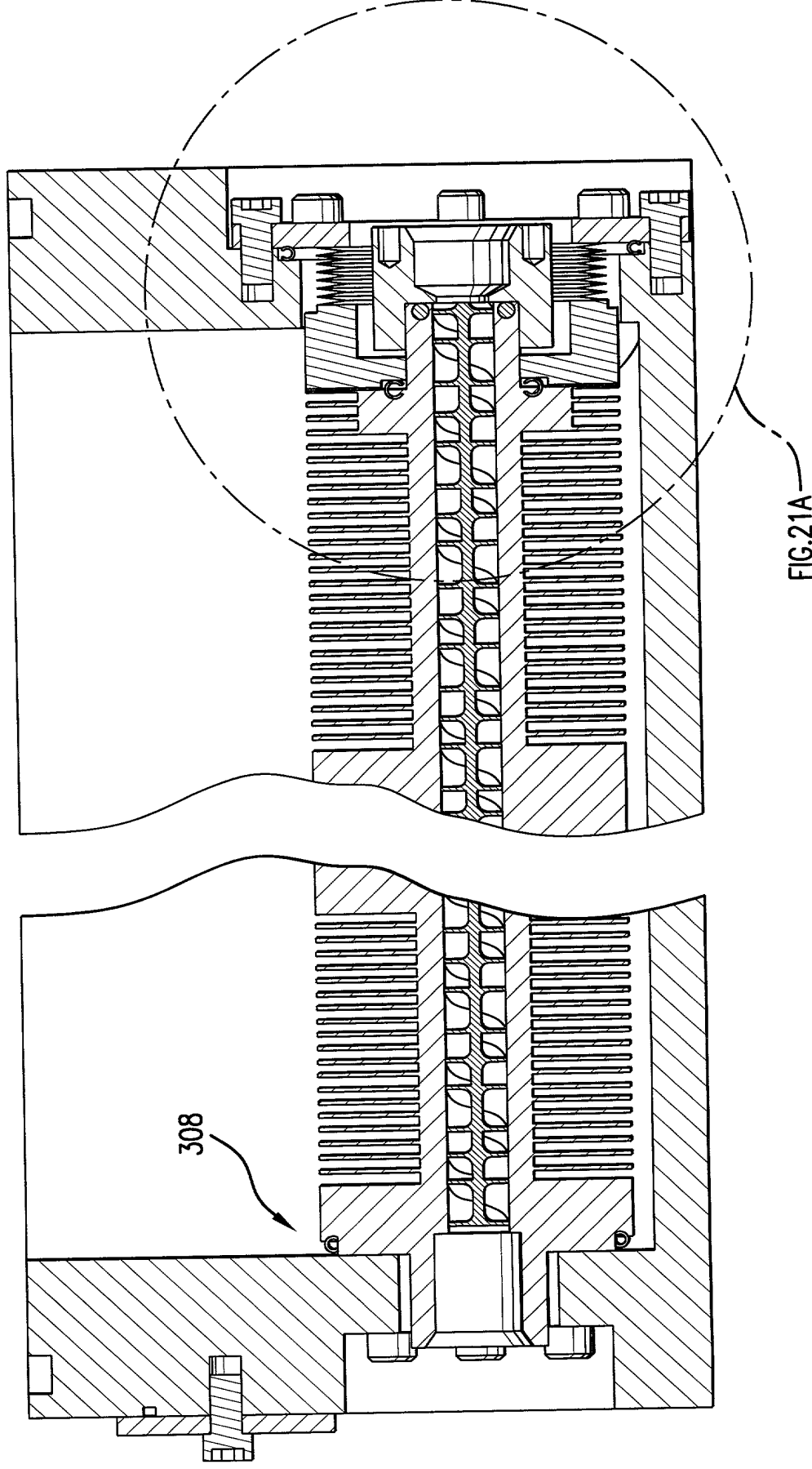


FIG. 19D4

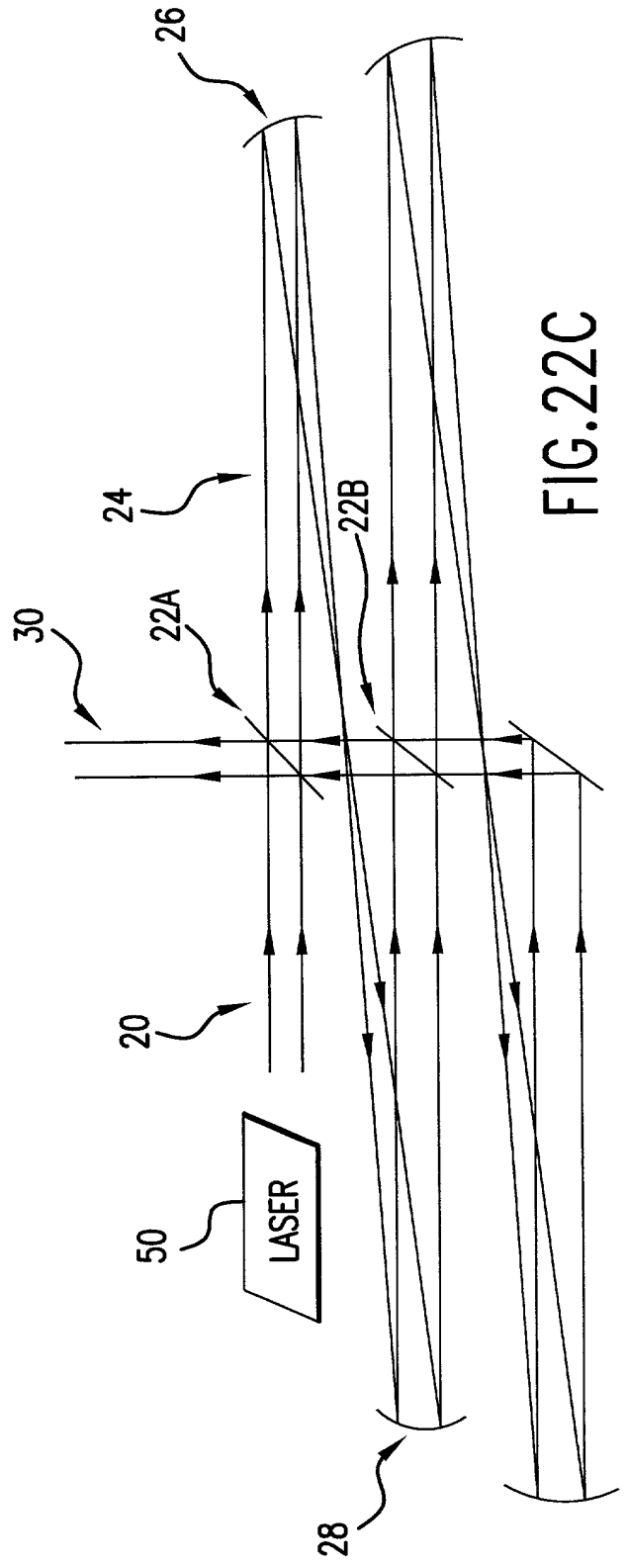
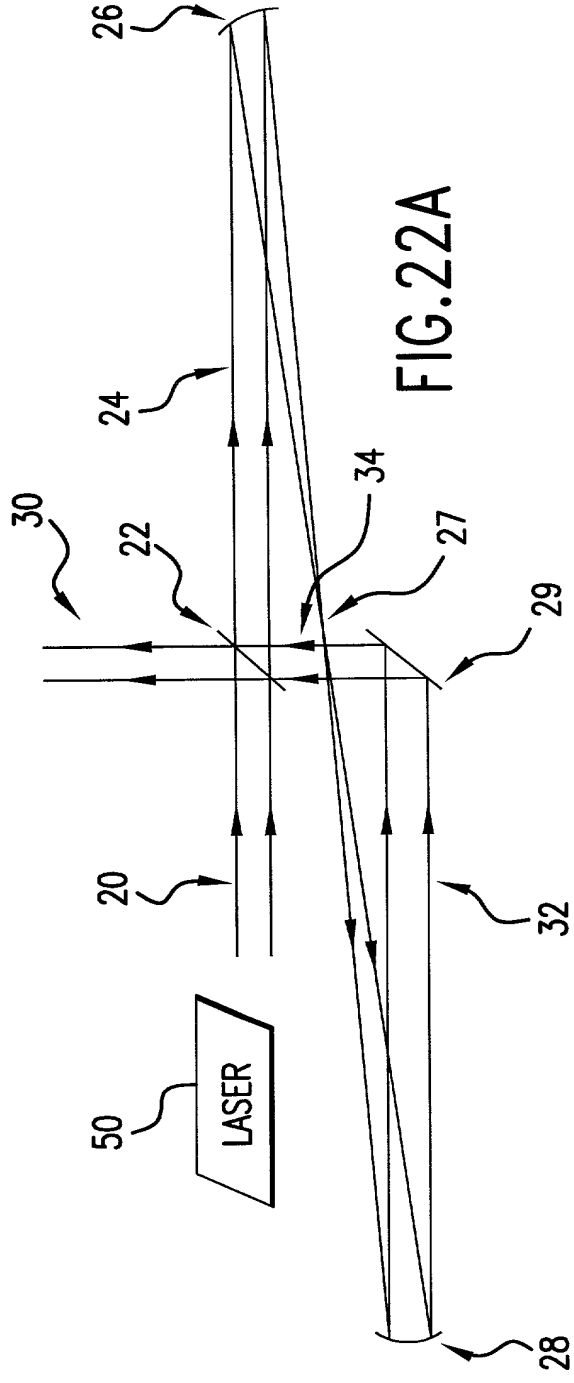
FIG. 19D3











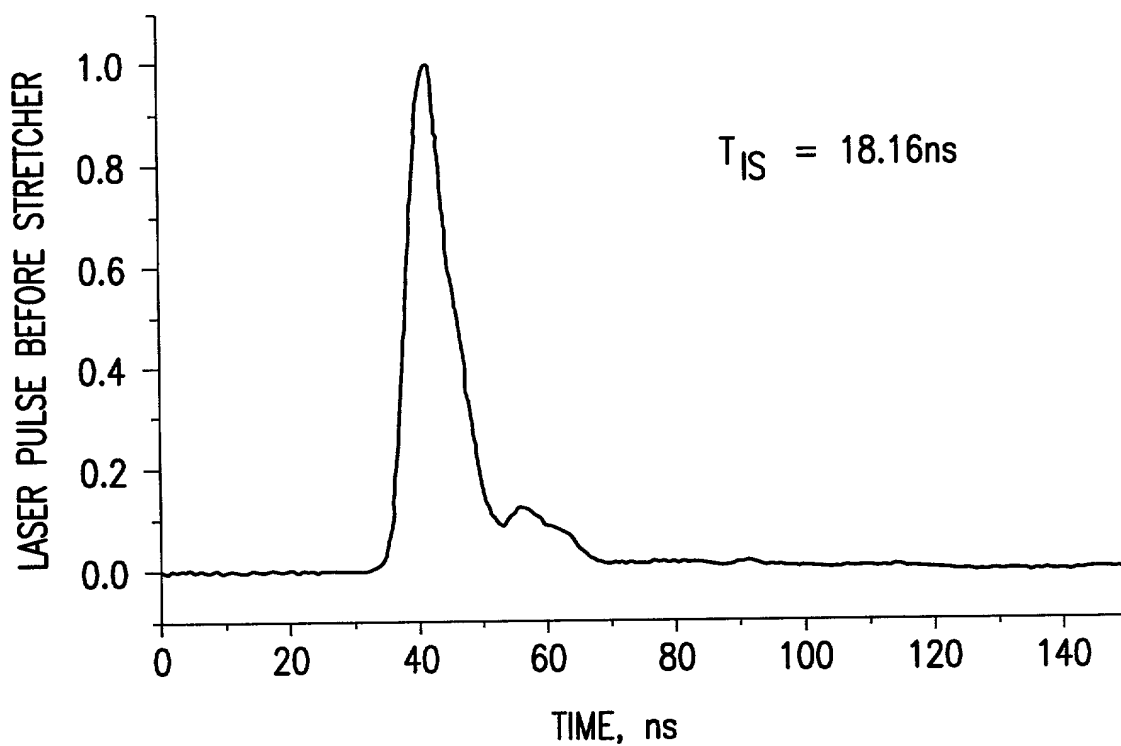


FIG.22B1

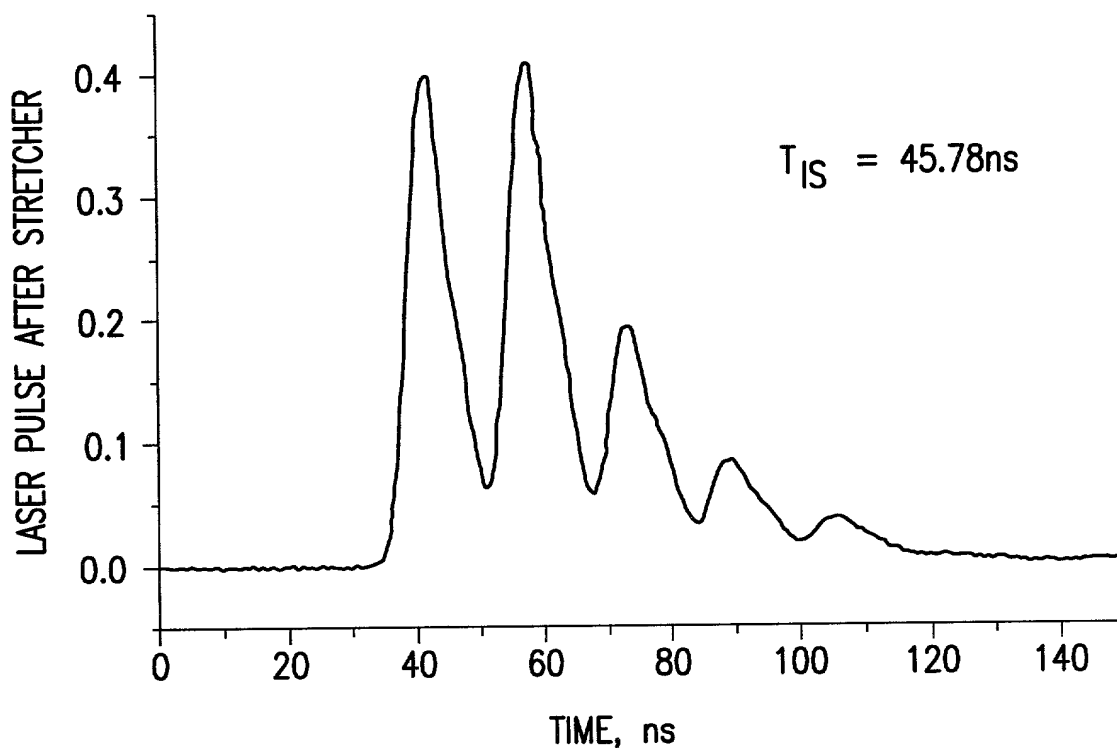


FIG.22B2

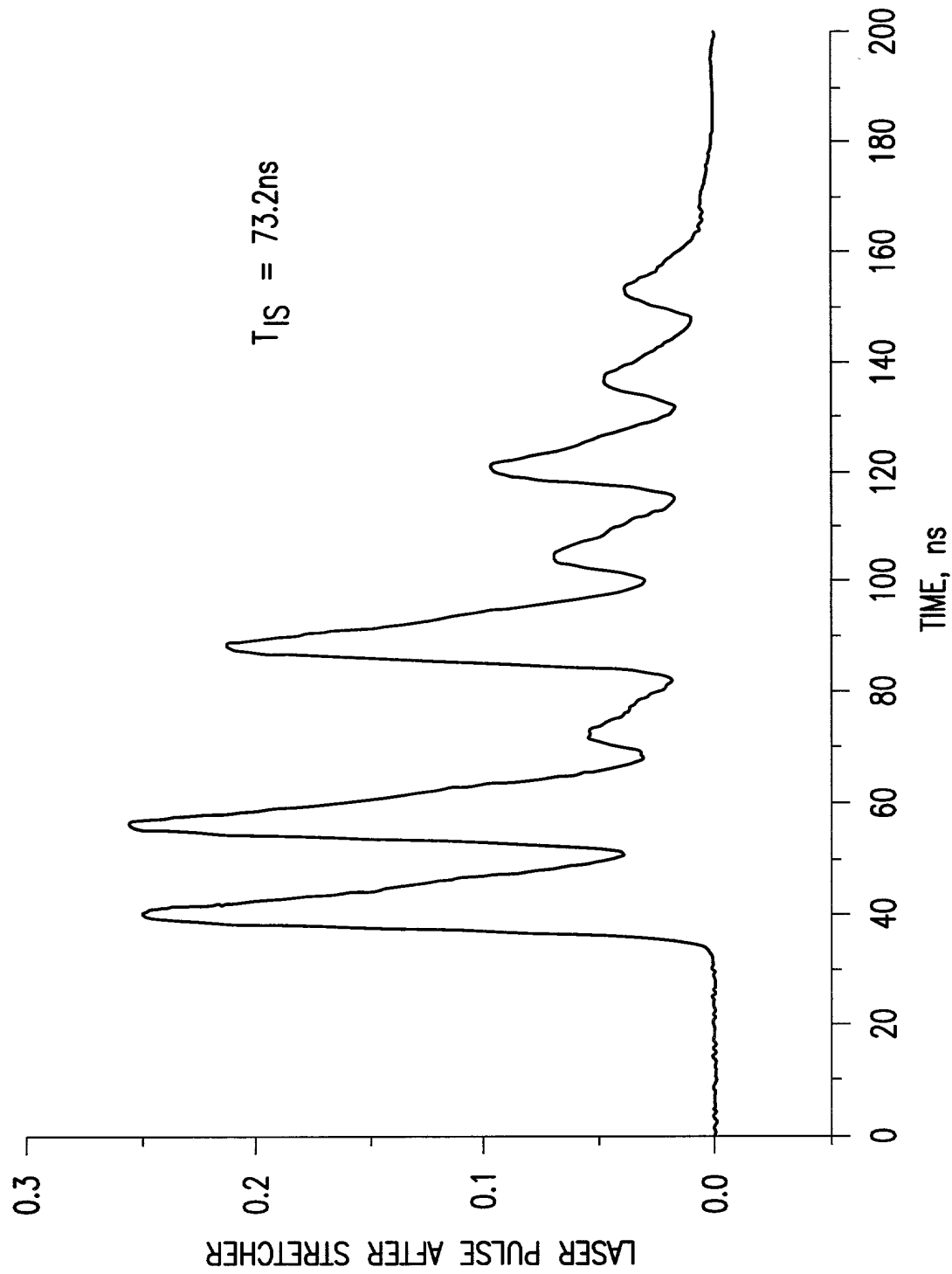


FIG.22D

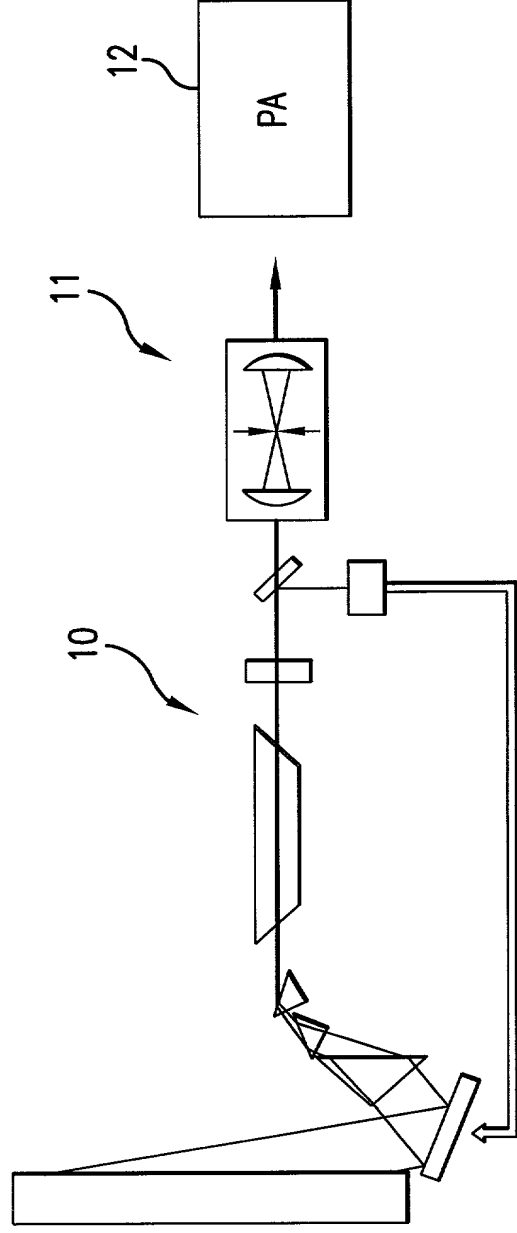


FIG.23

TIR SPATIAL FILTER TRANSMISSION FUNCTION

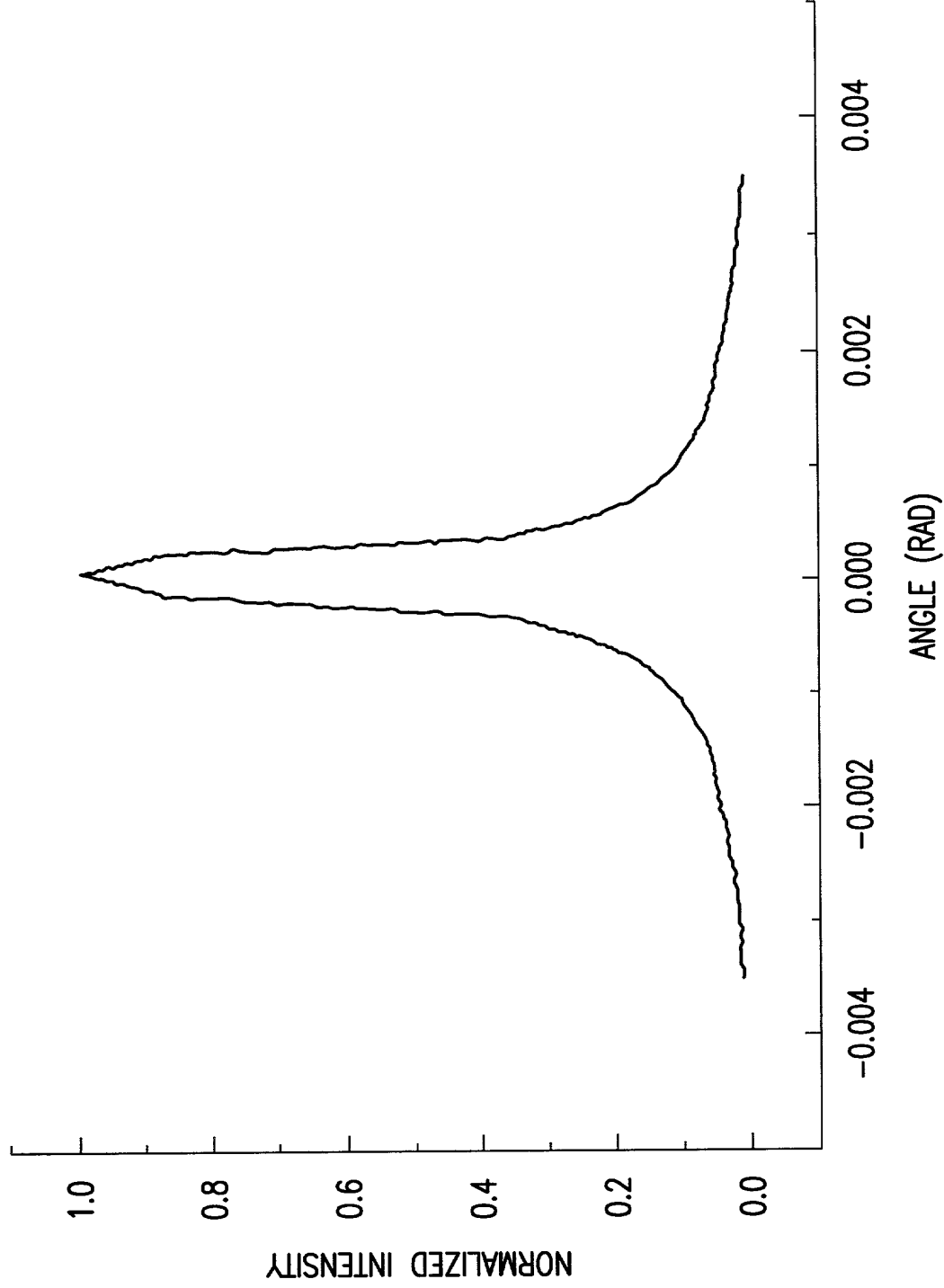


FIG.23A

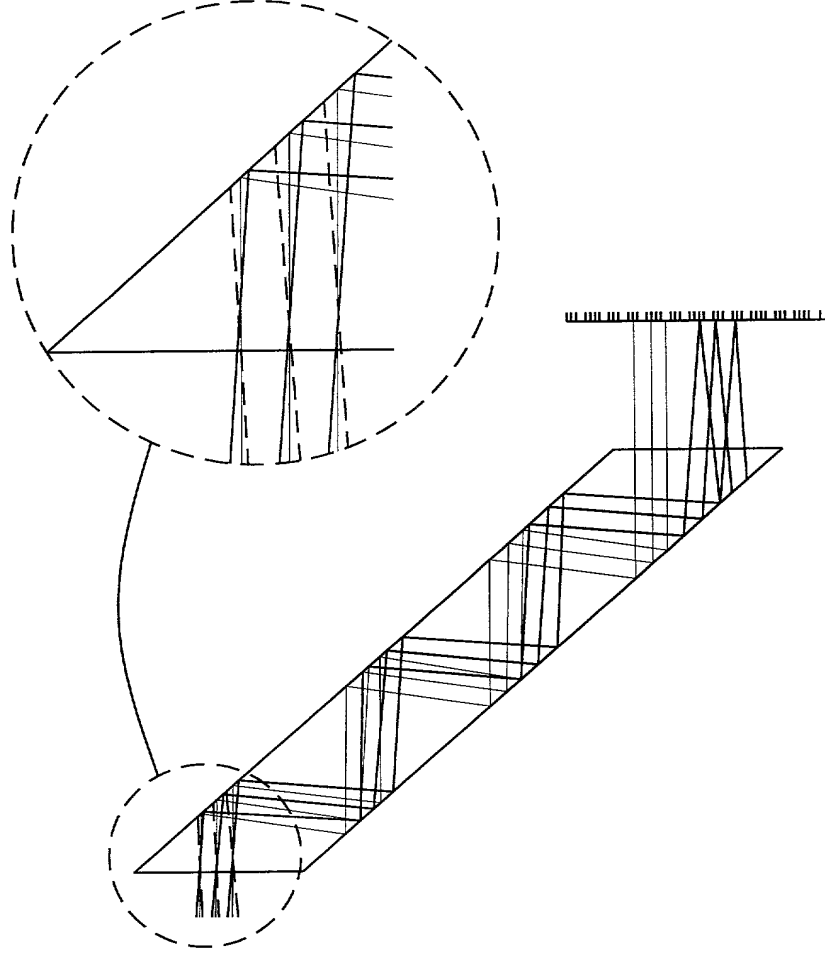


FIG. 23B